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ABSTRACT

Many adolescents' health problems arise from preventable behaviors, such as unprotected sexual intercourse and the use of tobacco, alcohol, and illicit drugs. The 1992 Washington State Survey of Adolescent Health Behaviors (WSSAHB) was created in order to collect information on a variety of health behaviors among students in the state of Washington, at the same time reducing a duplication of surveying effort. Items for the survey include questions on substance use, demographics, risk factors, predicting future use, perceived harmfulness of certain drugs, perceived parent attitudes toward use, estimates of friends' use, perceived effects of media advertising, medical care, safety, diet and weight, physical activity and exercise, HIV/AIDS education, sexual behavior, and suicide. The survey had a threefold objective: (1) obtain empirical needs assessment data necessary for program planning; (2) study trends of student substance use and abuse in participating schools and throughout the state; and (3) establish a baseline for future reference in the study of trends in other adolescent health behaviors. The survey was administered to over 15,463 public school students in 144 schools. The results of the survey confirm that a serious problem still exists with substance use and abuse among public school students. An initial decline of drug use from 1988 to 1990 leveled off in 1992. This problem is not confined to the urban centers nor to minority students, high school students, or any other specific group. Two appendices and 64 figures provide statistical summaries. Contains 41 references. (RJM)

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Adolescent Health Behaviors Among Public School Students in Washington 1988-1992

March 1993

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Adolescent Health Behaviors Among Public School Students in Washington
1988-1992

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March 1993

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The conduct and reporting of this survey, under the authorship of Drs. Eric Einspruch and Jim Pollard, reflects the continued refinement of an alcohol and other drug survey which began in 1985 (which has been administered twice before in Washington) and capacity building toward later achievements in regional training and technical assistance activities.

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Judith A. Johnson

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Executive Summary

Introduction and Approach

Many health problems experienced by adolescents are caused by preventable behaviors. In addition, habits formed during adolescence may lead to diseases not manifested until adulthood. Effective educational programs are needed to reduce the extent to which adolescents engage in health risk behaviors. Several efforts have been made in response to the widespread concern about adolescent health behaviors. These include the passage by Congress of the *Drug-Free Schools and Communities Act of 1986*, the initiation by the nation's Governors and the President of the *National Education Goals*, and the adoption by the U.S. Department of Health and Human Services of the *Healthy People 2000: National Health Promotion and Disease Prevention Objectives*.

The 1992 Washington State Survey of Adolescent Health Behaviors (WSSAHB) was created in order to collect information regarding a variety of adolescent health behaviors among students in the state of Washington, at the same time reducing a duplication of surveying effort. It comprises items from two formerly administered surveys—the Northwest Regional Educational Laboratory's (NWREL) Student Tobacco, Alcohol, and Other Drug (TAOD) Use Survey, sponsored by the Office of the Superintendent of Public Instruction (OSPI), and the National Centers For Disease Control's Youth Risk Behavior Survey (YRBS), sponsored by the Washington State Department of Health (DOH) and OSPI. The survey is the product of a collaborative effort between OSPI, DOH and NWREL. The results of the survey are important in determining the need for school- and community-based prevention and intervention programs, and in planning those programs. The 1992 WSSAHB was conducted by NWREL under contract from OSPI.

The items drawn from the NWREL Student Tobacco, Alcohol and Drug Use Survey for inclusion in the WSSAHB include questions on student use of various substances, demographics, risk factors predicting future use, perceived harmfulness of certain drugs, perceived parent attitudes toward use, estimates of friends' use, perceived effects of media advertising, and questions concerning alcohol and other drug education. The items drawn from the Youth Risk Behavior Survey that have been included in the WSSAHB ask about medical care, safety, diet and weight, physical activity and exercise, HIV/AIDS education, sexual behavior and suicide. Two versions of the survey were created, one for elementary school students, and another for junior high and high school students.

The Student Tobacco, Alcohol and Drug Use Survey has been administered twice before in the state of Washington (1988 and 1990). The YRBS has been administered once before in the state of Washington (1991), however, many districts declined to participate in this survey, and therefore there exist no previously collected data for the items on this survey. The present administration of the WSSAHB therefore provides the third data point for establishing trends in student attitudes and behaviors about tobacco, alcohol and other drugs among sixth, eighth and tenth grade students, and the second data point for twelfth grade students (twelfth grade students were not included in the 1988 administration). It also provides important baseline information regarding other adolescent health behaviors.

The objectives of the WSSAHB were:

1. To obtain empirical needs assessment data necessary for program planning;

2. To study trends of student substance use and abuse in participating schools (who receive individual school reports) and throughout the state; and

3. To establish a baseline for future reference in the study of trends in other adolescent health behaviors.

This report presents the results of the 1992 administration of the Washington State Survey of Adolescent Health Behaviors. It is intended for use by educators and program designers across the state to help focus the development of effective school- and community-based comprehensive health education programs. The results presented in this report are based on responses from over 15,463 public school students in 144 schools participating in the 1992 survey (including students in alternative schools). Private schools were also included in the sample. However, they were not included in this report due to the small number of participating schools, and to preserve comparability with previous survey administrations.

A stratified cluster sampling plan was developed to ensure that results would be representative of the state by region, school size, and rurality. However, there was a lower than expected school participation rate (only 45 percent of the original sample). Therefore, it was decided to include districts that had taken advantage of the opportunity to simultaneously conduct the survey, even though they had not been included in the original sample (so-called "piggyback" districts). Four subsequent studies of the resulting data led to the conclusion that it was reasonable to assume that the final group of respondents was representative of the state population. However, one should always exercise caution when making generalizations from a sample to a population. Statistical weighting procedures were used to bring the final sample into conformance with the original sampling plan. Even with these procedures, specific subgroups within the state are not always represented perfectly. Therefore, one should be even more cautious when making generalizations about these subgroups.

The analysis of results included the formulation of three composite scales: Alcohol Use Scale, Drug Use Scale and Health Risk Scale (this latter scale comprises both TAOD and other health behavior items). These scales attempt to simplify interpretation, summarizing the many behaviors contained in the specific items on the survey. The Alcohol Use Scale is a summary of the frequency of drinking and the quantity usually consumed when drinking. The Drug Use Scale is based on the addictiveness of the drug, frequency of use, and number of different drugs used. Still in its pilot form, the Health Risk Scale is an estimate of "risk of need for student services." Much technical study has gone into the development and validation of the first two scales. At the time of this writing, the third scale is more tentative, and will be the subject of continued study.

The inevitable question asked about self-report survey results is, "How do you know the students are telling the truth?" It's a question that all quality surveys in this area attempt to address. Perhaps one of the most important steps to take is during the administration of the survey itself. NWREL sent explicit instructions to each participating school, describing the directions for administration to ensure anonymity and confidentiality of the results. Once the survey was completed and the data were being processed, several statistical checks were made to detect inconsistent or obviously dishonest responses, and these surveys were discarded. As in 1988 and 1990, around 6 percent of the surveys were culled by these stringent criteria.

It is likely that the screening procedures detect exaggerators, but not minimizers. As a result, the survey findings reported here probably represent an underestimate of behaviors of students in Washington. The same conditions existed in the 1988 and 1990 survey, however, so the estimates of change presented throughout this report are likely little affected by this underestimate. In other words, the bias in reporting is probably in equal evidence in all three years, and its influence "cancels out" in estimates of change.

Lifetime Prevalence of Use

Lifetime prevalence (i.e., percentage of students who have ever tried a drug) shows when students begin to experiment with tobacco, alcohol and other drugs. Results of this survey indicated that since 1988 there continues to be a *substantial decline* in experimentation with *alcohol* among *eighth, tenth* and *twelfth grade students* enrolled in Washington's public schools. Unlike in 1990, however, this decline was not seen for students in sixth grade. Again unlike in 1990, there was no decline in experimentation with other drugs.

- As in 1988 and 1990, alcohol is by far the substance of choice for students surveyed at all grades. Beer and wine are preferred over hard liquor, but some form of alcohol has been tried by 33 percent of the sixth graders, 55 percent of the eighth graders, 70 percent of the tenth graders and 80 percent of the twelfth graders.

- The percentage of students who have tried illicit drugs declined at all grades from 1988 to 1990, but did not decline from 1990 to 1992. In the current survey, about one in every ten sixth grade students has tried some illicit drug at least once. The percentage of students having tried some illicit drug at least once was 23 in eighth grade, 33 in tenth grade and 39 among high school seniors.

Regular Use

While often cited in national statistics, lifetime prevalence tends to mask differences in levels of use and does not distinguish current users from those who are no longer using alcohol and other drugs. Regular use is defined as use of a substance at least six times in the past year. Specifically:

- While regular use of alcohol has continued to decline since 1988, it still increases dramatically by grade. Approximately 2 percent at sixth grade, 9 percent at eighth grade, 30 percent at tenth grade and 46 percent at twelfth grade report moderate to high use of alcohol.

- Along with fewer students drinking, indicators of drinking behavior have improved slightly since 1990. For example, the incidence of binge drinking has declined slightly at grades eight and ten. Still, when asked how many times they consumed five or more drinks at one sitting in the past two weeks (binge drinking), 11 percent of the eighth graders, 18 percent of the tenth graders and 27 percent of the high school seniors reported they had done this at least once.

- After a decline from 1988 to 1990 in regular use of illicit drugs at grades six and ten, regular use has remained stable at all grades from 1990 to 1992. At each grade, more students have progressed to higher levels of drug use. Less than 3 percent at sixth grade, 9 percent at eighth grade, 16 percent at tenth grade and 21 percent of high school seniors reported moderate to high use of illicit drugs.

- After an increase in tobacco use among eighth graders from 1988 to 1990, eighth graders showed a decrease in tobacco use from 1990 to 1992. Tenth grade students have shown a continued increase in tobacco use from 1988 to 1992. There was also a slight increase from 1990 to 1992 in eighth grade students' use of inhalants and tenth grade students' use of marijuana.

Substance Abuse

Students who have already reached a high level of alcohol or drug use require special attention. Substance abuse is defined as daily use of "gateway substances" (e.g., tobacco, alcohol, marijuana, inhalants) or at least monthly use of more powerful substances (e.g., cocaine, heroin). These students are at greatest risk of experiencing addiction or other health and safety problems. Schools must implement intervention strategies to reduce or stop substance use by these students.

- The results of the 1992 survey show little change in the proportion of sixth, eighth, tenth and twelfth grade students reporting heavy use of alcohol. Nearly 5 percent of the eighth graders report high use of alcohol, and by twelfth grade almost 25 percent of the students report high use of alcohol.

- There has also been little change from 1988 to 1992 in the proportion of students reporting high drug use (1 percent of sixth graders, 3 percent of eighth graders, 5 percent of tenth graders and 7 percent of twelfth graders).

- A conservative estimate of over 46,000 Washington students (over 11 percent) in grades six through twelve can be considered heavy drinkers. This figure is essentially unchanged from 1990, and represents a serious problem for Washington's schools and communities.

- A conservative estimate of over 17,000 Washington students (over 4 percent) in grades six through twelve can be considered heavy drug users. Again, this figure is essentially unchanged from 1990.

Patterns of Use

The aggregate results presented above do not portray differences among students of varying characteristics or across different locations in Washington. A few of the more interesting findings were:

- Although there are only slight gender differences in alcohol use before tenth grade, high school boys are nearly twice as likely as girls to drink heavily. Among high school seniors, 30 percent of the boys report high alcohol use, while only 17 percent of the girls report high levels of use.

- There are fewer gender differences in illicit drug use. There is little difference in the percentage of boys and girls who have ever tried these substances at any grade. Twelfth grade boys are somewhat more likely than girls to engage in heavy drug use.

- Students with different ethnic backgrounds report varying patterns of alcohol and other drug use. As in 1990, in 1992 Asian students were consistently the lowest users of alcohol and drugs, usually reporting less than half the use reported by the other four ethnic groups. Differences among Blacks, Hispanics, Native Americans and Caucasians tend to diminish at higher grade levels.

- Tenth graders in the Central/SE and W/SW regions of the state are more likely to be moderate to high users of alcohol than tenth graders in other regions. In contrast, twelfth graders in the E/NE region are more likely to be moderate to high users of alcohol than twelfth graders in other regions. There is little difference in moderate to high drug use among the four geographic regions within the state.

Factors Related to Use

Some items in the survey probed factors that are related to alcohol and other drug use, such as peer influences, exposure to drugs, perceptions of risk, and access to drugs.

- Peer influence has been found to be a major factor in initiating and maintaining use. There have been some changes in the level of opportunity to use alcohol and drugs through peer contact since 1990. Tenth grade students showed a small decrease in the perception that their closest friends use alcohol. Fewer students at all grade levels report alcohol and other drug use at parties they attend. In contrast, more tenth and twelfth grade students reported that they perceived a problem among students attending their school.

- As in previous years, in 1992 students who were active in extracurricular or after-school activities were somewhat less likely to report moderate to high alcohol or drug use than students who did not participate in any activities. That is, students who were more active were less likely to report use. This is not the case for participation on athletic teams, however, where increased participation is associated with similar or slightly greater alcohol or drug use.

- Also as in previous years, in 1992 students who anticipated going to college were much less likely to report moderate to high levels of drug use than those who did not plan to attend. A similar relationship, but not as strong, was also observed for alcohol use.

- The vast majority of students (75 to 85 percent) at all grades tended to perceive their parents as disapproving of smoking marijuana or drinking heavily, but more tolerant of attending parties where alcohol was served (45 to 60 percent). In general, students' perceptions of their parents' disapproval were up slightly from 1988 and 1990.

- Far fewer students recognized the risks of binge drinking than smoking cigarettes, marijuana, or using other drugs; but they did recognize the risks of sharing needles. With the exception of occasionally smoking marijuana, the perception of risk of all of these behaviors increased by grade.

- Although few sixth graders found it easy to obtain marijuana, most tenth and twelfth graders reported that it would be easy to get marijuana and, to a lesser extent, cocaine. Although these figures declined slightly from 1988 to 1990, they increased slightly in 1992. These figures indicate that high school students have little problem with access to illicit drugs.

Experience with Drug Education

The use of alcohol and other drugs by adolescents is not just a school problem—it involves the entire community. Still, there is a need for schools to play an active role in helping to deal with substance abuse through strong policies, comprehensive alcohol and drug education, and student assistance services.

This survey documented student perceptions of the alcohol and drug education they have received and the student assistance opportunities available to them:

- School was the primary source of information about alcohol and drugs for the majority of students at all grades. The percentage of sixth and eighth grade students citing school as the major source has risen since 1988 and 1990.

- Most Washington students felt that drug education should begin in elementary school. The highest proportion of students at each grade (40 percent or more) suggested third grade or earlier.

- As in 1988 and 1990, most students in grades eight, ten and twelve reported that their school offered a counselor or other staff with whom they could discuss a drug or alcohol problem. Far fewer students were aware of student support groups at these grades, but the presence of peer assistance services was more widely known. A substantial proportion of students indicated they did not know if these support services existed in their schools.

- Sixth grade students thought that Drug Abuse Resistance Education (D.A.R.E.) was the prevention program doing the best job of helping stop AOD use in their school. However, the higher the grade level, the less likely students were to indicate that they thought D.A.R.E. was the program doing the best job of AOD prevention at school. Instead, as grade level increased, so did the percentage of students who thought that peer assistance programs were doing the most to help prevent AOD use at school. Finally, as grade level increased, so did the percentage of students who thought that nothing was really helping prevent AOD use in school. It should be noted that these perceptions do not necessarily attest to the actual effectiveness of these programs.

- As students reached higher grade levels, they were less likely to think that classroom presentations were the most important form of prevention programming. Instead, they were more likely to think that student groups were the most important form of prevention programming. Also, as students reached higher grade levels, they were less likely to think that prevention programs can help reduce AOD use.

Perceived Effects of Media Advertising

Media advertising is almost a constant in students' lives. Students spend a great deal of time watching television, and it is not uncommon for youth to listen to the radio both at home and in the car. Several items were added to the survey this year to obtain students' perceptions of the effects of media advertising.

- At grades eight, ten and twelve, two out of three students surveyed thought that alcohol advertising was aimed at both adults and adolescents, and that this advertising influences young people to drink.

- If they were to try to reduce AOD use among young people their age, students at the eighth grade level thought it would be most important to eliminate alcohol advertising (27 percent) or provide more school prevention programs (25 percent). Students at twelfth grade thought it would be most important to provide alternative activities (32 percent).

Reminder to the Reader

The reader is reminded that the Washington State Survey of Adolescent Health Behaviors comprises items from two previously administered surveys, one asking questions about tobacco, alcohol and other drugs, and the other asking questions about other adolescent health behaviors. Up to this point, results for TAOD-related items have been presented, along with comparisons from previous survey administrations. From this point on, however, results for the items related to other health behaviors will be presented. As this administration of the WSSAHB represents the first occasion that data for these items have been collected, only baseline information is available at this time.

Medical and Dental Care

Adequate medical and dental care is a prerequisite to students' ability to profit from the school experience. Indeed, poor health is a principal cause of life's difficulties. Given the nature of physical, mental and emotional development, it is especially important that youth receive proper health care.

- Students responding to this survey generally had received recent medical and dental attention. For those students at eighth grade and higher, 75 percent had seen a doctor within the last year for a regular physical examination. A similar percentage had also seen a dentist within the past year. Although small, the percentage of students who indicated that they had never received a regular physical examination (3 percent at sixth grade) or had never seen a dentist (4 percent at sixth grade) is cause for concern.

Safety

Injuries are a leading cause of death for adolescents, and as many as half the deaths due to injury are motor vehicle related. Motor vehicle caused injuries are also a leading contributor of adolescent admissions to hospitals and emergency rooms. Alcohol and other drug use is often involved in these injuries. Physical fighting is another leading cause of adolescent injuries.

- During the past thirty days, one out of five sixth grade students had been in a vehicle driven by someone who had been drinking. At twelfth grade, one out of three students had been in a vehicle driven by someone who had been drinking.

- During the past thirty days, one out of ten tenth grade students, and one out of five twelfth grade students, had driven a vehicle while or after drinking alcohol or using drugs.

- As many as one-fourth of the students had carried a weapon (such as a gun, knife or club) during the past month for self-protection or because they thought they might need it in a fight. This is the same percentage that had ever carried a weapon to school.

Diet and Weight

Youth who are overweight and remain so as adults are at risk for a variety of chronic illnesses in adulthood. However, over-emphasis on body-weight during adolescence may contribute to potentially harmful weight-management practices and eating disorders. A finding of this survey was that:

- The percentage of students surveyed who reported that they think of themselves as either too thin or too fat was 29 percent in sixth, 37 percent in eighth, 39 percent in tenth and 38 percent in twelfth grade.

Physical Activity and Exercise

As important as diet and nutrition, regular physical exercise plays a role in promoting health and well-being. In addition to reducing the risk of being overweight, it has been shown that regular physical activity may reduce the risk for certain health problems. Patterns of physical activity established during childhood/adolescence are likely to continue into adulthood.

- As many as one-fourth of the students surveyed had not engaged in hard physical exercise during the past week.

- As many as 30 percent of the students surveyed had spent three or more hours each school day watching television or videos, or playing computer games.

HIV/AIDS Education

AIDS is the final, and fatal, phase of HIV disease. Although less than one-half of one percent of all AIDS cases are among the 13-19-year-old age group, the number of diagnosed cases of HIV is doubling each year. AIDS has become the sixth leading cause of death among the 15-24-year-old age group. Twenty percent of AIDS cases are among the 20-29-year-old age group; significant because it takes an average of 10 years for HIV disease to progress to AIDS, meaning that many of these young adults acquired HIV as adolescents.

- As with alcohol and other drug education, most students think that education about sexually transmitted diseases should begin in elementary school.

Sexual Behavior

- Almost one-fourth of the eighth grade students responding to this survey reported that they had had sexual intercourse at some time in their life. This percentage increases quickly as students get older, so that 42 percent at tenth grade and 60 percent at twelfth grade reported having had intercourse. Of those students who have had sexual intercourse, almost all had this experience by the time they were 16 years old.

- Physical and sexual abuse is far too common an experience among students in Washington state. By twelfth grade, 19 percent of the students surveyed reported that they had been physically abused or mistreated by an adult. Similarly, 18 percent reported having been sexually abused (defined on the survey as when "someone in your family or someone else touches you in a sexual way in a place you did not want to be touched, or does something to you sexually which they shouldn't have done).

Suicide

Attempted suicide is a potentially lethal health event, a risk factor for future completed suicide, and a potential indicator of other health problems. Suicide rates are the most rapidly increasing cause of death among adolescents, having quadrupled over the last forty years (from 2.7 to 11.3 per 100,000). It is estimated that 10-25 percent of all adolescent deaths are the result of suicide.

- Among those Washington students surveyed, during the past year 20 percent of the students at grades eight and twelve had seriously thought about committing suicide. Even more students at tenth grade (24 percent) had seriously thought of taking their own lives. Of even greater concern are the percentages of students who actually made a suicide attempt: 10 percent at grades eight and twelve, and 13 percent at grade ten. About one-third of these suicide attempts resulted in an injury, poisoning or overdose that had to be treated by a doctor or a nurse.

Conclusion

The 1992 administration of the Washington State Survey of Adolescent Health Behaviors was the product of a collaborative effort among the Office of the Superintendent of Public Instruction, the Department of Health, and the Northwest Regional Educational Laboratory (which administered the survey under contract with OSPI). The WSSAHB expands on the work of two previous administrations of a student tobacco, alcohol and other drug survey sponsored by OSPI, and includes questions about medical care, safety, diet and weight, physical activity and exercise, HIV/AIDS education, sexual behavior, and suicide. By expanding the scope of the survey it was possible to gather information necessary for planning a comprehensive set of prevention programs.

- The results of this survey confirm that, while progress has been made since 1988 and 1990, a serious problem still exists with substance use and abuse among public school students in Washington. This problem is not confined to the urban centers, nor to minority students, nor to high school students, nor to any other specific group.

- There is indication that actual use of alcohol is going down for eighth, tenth and twelfth grade students. In contrast, use of alcohol has not declined for sixth grade students. While there are some specific exceptions, in general the use of drugs has not decreased. These findings indicate that after an initial decline, from 1988 to 1990, there has been a leveling off in 1992. Important to note, there has been continued increase over the last four years in use of both smoking and chewing tobacco by tenth grade students.

- Students themselves continue to agree that alcohol and drug education must start early. Many feel it should begin at the third grade level or earlier. While young students perceive that prevention programs are benefiting students, older students are less likely to think that anything is (or even can) reduce student AOD use.

- The present survey tapped for the first time a variety of adolescent health behaviors. The results indicate a need for statewide efforts to address a variety of student needs. For example, it is indeed cause for concern that: during the thirty days prior to the survey, one out of five twelfth graders had driven a vehicle while or after drinking alcohol or using drugs; one-fourth of the students in eighth, tenth and twelfth grades has on at least one occasion carried a weapon to school; one-fourth of the twelfth grade students had not engaged in hard physical exercise in the week prior to the survey; nearly one out of five seniors surveyed indicated that they had been sexually abused; and one out of ten eighth, tenth and twelfth grade students had attempted suicide at least once during the past year.

Introduction And Approach

Many health problems experienced by adolescents are caused by preventable behaviors, such as drinking and driving, and unprotected sexual intercourse. Tobacco use, excessive consumption of fats, and insufficient physical activity are habits formed during adolescence which are known to lead to diseases not manifested until adulthood. Effective educational programs are needed to reduce the extent to which adolescents engage in these health risk behaviors. To reduce overall risk, a health education program should be as comprehensive as possible and incorporate a coordinated, collaborative effort among schools, parents, and the community. It is important that schools and communities provide accurate information and repeated opportunities for students to develop skills that will enable them to reduce alcohol and other drug use, tobacco use, behaviors that result in intentional and unintentional injuries, sexual behaviors that result in sexually transmitted diseases and unintended pregnancies, dietary excesses and imbalances, and physical inactivity.

Several efforts have been made in response to the widespread concern about adolescent health behaviors. Congress passed the *Drug-Free Schools and Communities Act of 1986* which encouraged states and local education agencies to cooperatively plan with community agencies for comprehensive prevention, early intervention and treatment referrals for affected children and youth. In 1989 the nation's Governors and the President initiated the *National Education Goals*. Goal number six states that by the year 2000, "every school in America will be free of drugs and violence and will offer a safe, disciplined environment conducive to learning." And in 1990 the U.S. Department of Health and Human Services, Public Health Service, addressed a variety of behaviors when it adopted its *Healthy People 2000: National Health Promotion and Disease Prevention Objectives*. The *Healthy People 2000* goals are threefold: 1) increase the span of healthy life for Americans, 2) reduce health disparities among Americans, and 3) achieve access to preventive services for all Americans. Specific objectives are cited throughout the report you are about to read, and serve as one point of comparison for the results which are presented.

The 1992 Washington State Survey of Adolescent Health Behaviors (WSSAHB) comprises items from two formerly administered surveys—the Northwest Regional Educational Laboratory's (NWREL) Student Tobacco, Alcohol, and Other Drug (TAOD) Use Survey, sponsored by the Office of the Superintendent of Public Instruction (OSPI), and the National Centers For Disease Control's Youth Risk Behavior Survey (YRBS), sponsored by the Washington State Department of Health (DOH) and OSPI. The survey is the product of a collaborative effort between OSPI, DOH and NWREL. It was created in order to collect information regarding a variety of adolescent health behaviors among students in the state of Washington. At the same time, combining the two previous surveys reduced the burden placed on schools in the effort to collect this information, and also eliminated some duplication of effort (some items were common to both surveys). The results of the survey are important in determining the need for school- and community-based prevention and intervention programs, and in planning those programs. The 1992 WSSAHB was conducted by NWREL under contract from OSPI.

The original Student Tobacco, Alcohol and Drug Use Survey was developed by NWREL staff. The survey has evolved through reviews by district and state advisory committees throughout the northwest states. In addition to questions on student use of various substances, the survey includes items tapping student demographics, risk factors predicting future use, perceived harmfulness of certain drugs, perceived parent attitudes toward use, estimates of friends' use, perceived effects of media advertising, and questions concerning alcohol and other drug education. The survey has been administered twice before in the state of Washington. In 1988, the survey was administered to a sample of students in the sixth, eighth and tenth grades. The survey was replicated in 1990, with the addition of including students in the twelfth grade in the sample. The present administration of the WSSAHB therefore provides the third data point for establishing trends in student attitudes and behaviors among sixth, eighth and tenth grade students, and the second data point for twelfth grade students (this is why no 1988 data appears for seniors in the tables and figures in this report).

The YRBS has been administered once before in the state of Washington, during 1991. However, many districts declined to participate in this administration, citing duplicate questions on the previous year's Student Tobacco, Alcohol, and Other Drug Use Survey. The present administration of the WSSAHB therefore provides important baseline information regarding other adolescent health behaviors. The reader of this report must remember that no trends for these behaviors appear in this report, since this administration of the WSSAHB represents the first time these data have been collected. The items drawn from the Youth Risk Behavior Survey that have been included in the WSSAHB ask about medical care, safety, diet and weight, physical activity and exercise, HIV/AIDS education, sexual behavior and suicide.

The objectives of this study were:

1. To obtain empirical needs assessment data necessary for program planning;

2. To study trends of student substance use and abuse in participating schools (who receive individual school reports) and throughout the state; and

3. To establish a baseline for future reference in the study of trends in other adolescent health behaviors.

This report presents the results of the 1992 administration of the Washington State Survey of Adolescent Health Behaviors (detailed results at the item level are presented in full in Appendix A). It is intended for use by educators and program designers across the state to help focus the development of effective school- and community-based comprehensive health education programs. The results presented in this report can be used to identify adolescent needs, develop educational programs to meet those needs, and design teacher training based on effective curricula. This report can also be shared with parents and others who are interested in informing decision makers about the need for effective school and community health programs in Washington State.

The results presented in this report are based on responses from 15,463 public school students in a total of 144 schools participating in the 1992 survey (including students in alternative schools). Private schools were also included in the sample. However, they were not included in this report due to the small number of participating schools, and to preserve comparability with previous survey administrations. While this is fewer than 10 percent of the statewide enrollment at grades six, eight, ten and twelve, the scientific sampling plan used was designed to assure accurate representation of the state population at these grades. However, there was a lower than expected school participation rate (only 45 percent of the original sample); therefore, it was decided to include districts that had taken advantage of the opportunity to simultaneously conduct the survey, even though they had not been included in the original sample (so-called "piggyback" districts). Four subsequent studies of the resulting data led to the conclusion that it was reasonable to assume that the final group of respondents was representative of the state population. However, one should always exercise caution when making generalizations from a sample to a population. Statistical weighting procedures were used to bring the final sample into conformance with the original sampling plan. Even with these procedures, specific subgroups within the state are not always represented perfectly. Therefore, one should be even more cautious when making generalizations about these subgroups. Details of the sampling plan, weighting procedures and studies of the representativeness of the resulting data are presented in Appendix B of this report.

The analyses of the results included the formulation of three composite scales indicating the extent of students' alcohol use, drug use and risk of future health problems. These scales attempt to simplify interpretation, summarizing the many behaviors contained in the specific items on the survey. Much technical study has gone into the development and validation of the first two scales. At the time of this writing, the third scale is more tentative, and will be the subject of continued study. Technical aspects of these scales are also detailed in Appendix B.

The inevitable question asked about self-report survey results is, "How do you know the students are telling the truth?" It's a question that all quality surveys in this area attempt to address (Gabriel, Pollard & Arter, 1990). Perhaps the most important step to take is in the administration of the survey itself. NWREL sent explicit instructions to each participating school, describing the directions for administration to ensure anonymity and confidentiality of the results. Once the survey was completed and the data were being processed, several statistical checks were made to detect inconsistent or obviously dishonest responses and these surveys were discarded. As in 1988 and 1990, around 6 percent of the surveys were culled by these stringent criteria. Again, these procedures are detailed in Appendix B of this report.

Findings

This section describes the major findings from the survey of Washington public school students in grades six, eight, ten and twelve. The responses to each item of the survey, administered from December 1992 - February 1993, are listed by grade in Appendix A. In general, the true value for a statewide group will be within one to two percentage points of the observed percentages displayed in this report and listed in Appendix A (a discussion of the topic of statistical error is presented in Appendix B).

The findings are organized under fourteen topics:

Lifetime Prevalence of Use (Tobacco, Alcohol and Other Drugs)
Regular Use
Substance Abuse
Patterns of Use
Factors Related to Use
Experience with Alcohol and Drug Education
Perceived Effects of Media Advertising
Medical Care
Safety
Diet and Weight
Physical Activity and Exercise
HIV/AIDS Education
Sexual Behavior
Suicide

Lifetime Prevalence of Use

Finding: *Following a decline from 1988 to 1990, the percentage of students who have ever tried drugs did not change in 1992. In contrast, there continues to be a decline in the percentage of eighth, tenth, and twelfth graders who have ever tried alcohol.*

In *What Works: Schools Without Drugs*, the U.S. Department of Education (1989) argues for a clear, strong "no use" message for all drugs, including alcohol. Enforcement and treatment approaches have not proven to be very effective in eliminating substance abuse (Falco, 1992). The chance of breaking the grip of substance abuse is greatest if the onset of use can be delayed as long as possible. As reported by Werner (1991, p. 6), "other than gender, the major demographic variable associated with substance use is age of onset, with an early age of onset being the predictor of subsequent use." Similarly, Hawkins (1989, p. 11) reported that research suggests that "kids who begin to initiate their drug use before the age of 15 have more than twice the risk of having drug problems than people who wait until after the age of 19 to initiate the use of alcohol or drugs, even though they do initiate. There may be both sociological and physiological reasons for this risk factor."

In Tables 1a and 1b, the percentage of students at each grade indicating they had ever tried any illicit drug, any alcohol and each of 16 substances is given. The tables also provide a comparison between the results obtained in 1988 (Deck & Nickel, 1989a) and 1990 (Gabriel, 1991) with those obtained in 1992 using the nearly identical questions. The change in lifetime prevalence was computed unless there was a meaningful change in the wording of the item in 1990 or 1992. For example, in 1988, students reported their use of over-the-counter drugs such as Dexatrim, diet pills, etc. In 1990, this item was changed to ask their use of "drugs purchased from the drug store to get high such as diet pills, stay-awake drugs... ." The added phrase indicating the purpose "to get high" may have caused fewer students to report their use than in 1988.

In contrast to the results of the previous survey, in which it was students at grade six who reported a decline in lifetime prevalence in AOD use, the present survey shows declines for students in the other three grades. Also, the present declines are mainly for alcohol. This finding is of particular concern, given the clearly established relationship between early onset of alcohol and other drug use and later problems with substance abuse. Delaying the onset of experimentation has become one of the important goals of prevention. The declines at higher grade levels may be due to the insensitivity of this indicator (lifetime prevalence) beyond the early experimental years. Even with this, however, the percentage of students having ever tried alcohol is clearly less at grades eight, ten, and twelve in 1992 than in 1990 or 1988.

Table 1a.
Lifetime Prevalence of Use
Percent Ever Used, by Grade and Year
Grades Six and Eight

	Grade 6				Grade 8			
	'88	**'90**	**'92**	**Change**	**'88**	**'90**	**'92**	**Change**
Any Illicit Drug	17.0	9.7	9.4	-0.3	26.9	23.8	23.0	-0.8
Any Alcohol	51.4	33.0	33.0	0.0	68.9	60.2	55.3	**-4.9**
Smoking Tobacco	12.4	11.3	11.7	0.4	29.8	32.5	31.0	**-1.5**
Chewing Tobacco	9.5	5.4	5.5	0.1	16.6	13.9	13.1	-0.8
Beer	38.5	23.4	22.4	-1.0	56.5	48.5	43.3	**-5.2**
Wine cooler	39.9	25.0	21.1	**-3.9**	60.0	53.2	43.2	**-10.0**
Wine[1]			17.6				38.2	
Hard liquor	14.2	8.4	9.3	**0.9**	34.3	31.5	28.7	**-2.8**
Marijuana	3.6	1.7	1.9	0.2	14.4	11.2	9.7	**-1.5**
Cocaine (crack)	0.8	0.9	1.1	0.2	2.8	3.4	2.6	**-0.8**
Opiates[3]	2.5	1.4			3.3	3.8		
Depressants[3]	1.1	0.8			4.5	4.6		
Tranquilizers[3]	1.9	0.7			3.4	3.7		
Hallucinogens[3]	1.5	0.8	1.2	**0.4**	4.1	5.7	5.6	-0.1
Inhalants	13.0	7.5	7.7	0.2	17.3	17.1	17.4	0.3
Stimulants[3]		1.8				8.8		
Steroids	1.7	1.2	1.1	-0.1	3.3	2.7	1.9	**-0.8**
Over-the-counter[2]		7.0	7.8	**0.8**		13.8	11.1	**-2.7**
Crystal Meth.[2,3]		0.9				3.0		
Other drugs			1.4				4.8	

Note: Changes which are highlighted were significant ($p<.05$).

[1] Wine and wine coolers were combined in previous years

[2] Comparative data for 1988 not printed due to substantially different wording of the item.

[3] Low incidence drug use questions were combined into the "Other drugs category" in the current survey.

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Table 1b.
Lifetime Prevalence of Use
Percent Ever Used, by Grade and Year
Grades Ten and Twelve

	Grade 10				Grade 12[1]		
	'88	'90	'92	Change	'90	'92	Change
Any Illicit Drug	44.1	33.5	32.5	-1.0	41.0	38.7	-2.3
Any Alcohol	84.1	75.7	70.3	**-5.4**	83.0	79.8	**-3.2**
Smoking Tobacco	43.1	43.4	43.7	0.3	51.7	52.6	0.9
Chewing Tobacco	21.5	22.1	23.2	1.1	28.5	27.9	-0.6
Beer	71.6	65.3	61.8	**-3.5**	75.3	73.3	**-2.0**
Wine cooler[2]	77.6	68.6	57.8	**-10.8**	76.3	68.3	**-8.0**
Wine[2]			51.7			60.6	
Hard liquor	56.8	53.5	52.1	-1.4	66.1	65.1	-1.0
Marijuana	32.7	21.5	22.8	1.3	34.0	32.9	-1.1
Cocaine (crack)	8.1	4.3	3.5	**-0.8**	7.8	4.6	**-3.2**
Opiates[3]	7.1	6.5			7.6		
Depressants[3]	6.5	5.2			4.7		
Tranquilizers[3]	6.4	5.5			5.1		
Hallucinogens	12.1	9.1	11.1	**2.0**	13.7	16.8	**3.1**
Inhalants	19.5	17.7	15.6	**-2.1**	16.4	13.1	**-3.3**
Stimulants[3,4]		13.0			17.4		
Steroids	4.9	3.0	2.2	**-0.8**	3.2	2.4	**-0.8**
Over-the-counter[4]		23.2	18.4	**-4.8**	27.2	22.3	**-4.9**
Crystal Meth.[3,4]		3.1			4.3		
Other drugs[4]			7.9			9.5	

Note: Changes which are highlighted were significant (*p*<.05).

[1] Grade 12 was not included in the 1988 survey.

[2] Wine and wine coolers were combined in previous years

[3] Low incidence drug use questions were combined into the "Other drugs category" in the current survey.

[4] Comparative data for 1988 not printed due to substantially different wording of the item.

Changes or differences in lifetime prevalence from 1990 to 1992 in Tables 1a and 1b which reach the criterion of statistical significance are printed in **bold** type. Although the amount of change required to meet this criterion varies somewhat with the size of the percentage in question and the sample size at the particular grade level, a one to two percentage point difference is approximately the size of the discrepancy needed in this survey to be deemed statistically significant (see Appendix B for a more complete coverage of this topic). The important implication for interpretation is that lesser differences may be within sampling error and not reflective of real differences in the population of Washington's students. Although they are listed in Tables 1a and 1b, changes not highlighted in bold ought to be considered essentially zero.

Students were asked how often they had used several substances. Choices included never, seldom, monthly, weekly, and daily. The lifetime prevalence of substance use was determined from the total percent of students reporting seldom, monthly, weekly and daily use, or conversely, 100 minus the percentage never using. Similarly, *low* to *high* use on the Alcohol Use and Drug Use scales may be used to determine the lifetime prevalence of any form of alcohol or illicit drugs.

Lifetime prevalence, while a commonly cited statistic at the national level, is not a particularly useful indicator of current use levels of Washington's students. It is a measure of the percentage of students who have *ever tried*, even once in their lives, the substance in question. Obviously, once a student tries a substance, he or she is forever considered a "user" in the lifetime prevalence sense. Since Washington state is in the position of examining trends in use over time, lifetime prevalence is of limited value.

Finding: As in 1988 and 1990, alcohol continues to be the substance of choice for students at all grades.

Figure 1 presents the lifetime prevalence (i.e., the percentage of students ever having tried the drug) of several categories of substances by grade level. The percentages are also given in Tables 1a and 1b. The figure clearly shows that students at all four grade levels reported greater use of alcohol than all other substances. By sixth grade about one in four students have tried beer (22 percent) or wine (21 percent) and by twelfth grade this rate has tripled—three out of four have tried beer (73 percent) or wine (68 percent).

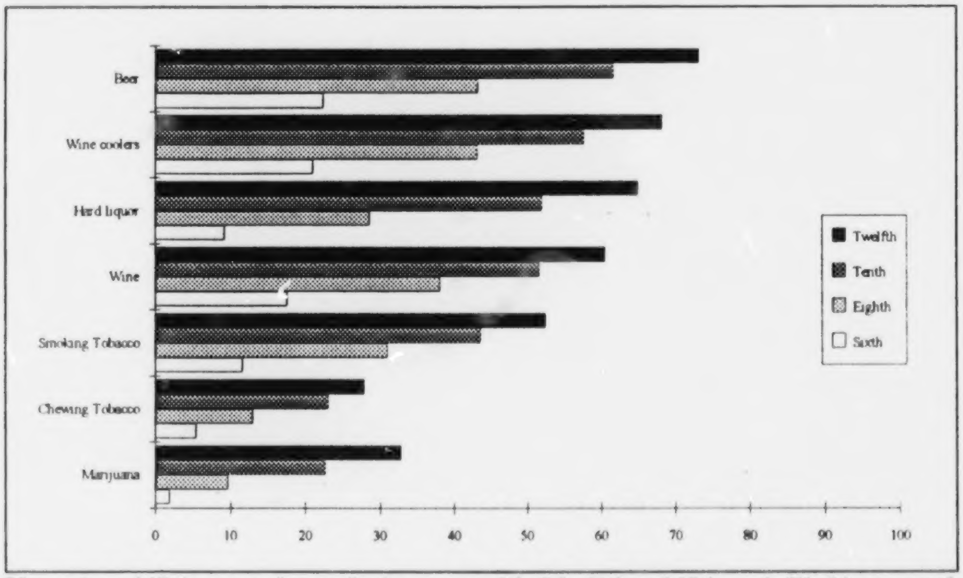

Figure 1a. Lifetime prevalence of substance use 6th, 8th, 10th and 12th grade Washington students (Higher prevalence substances).

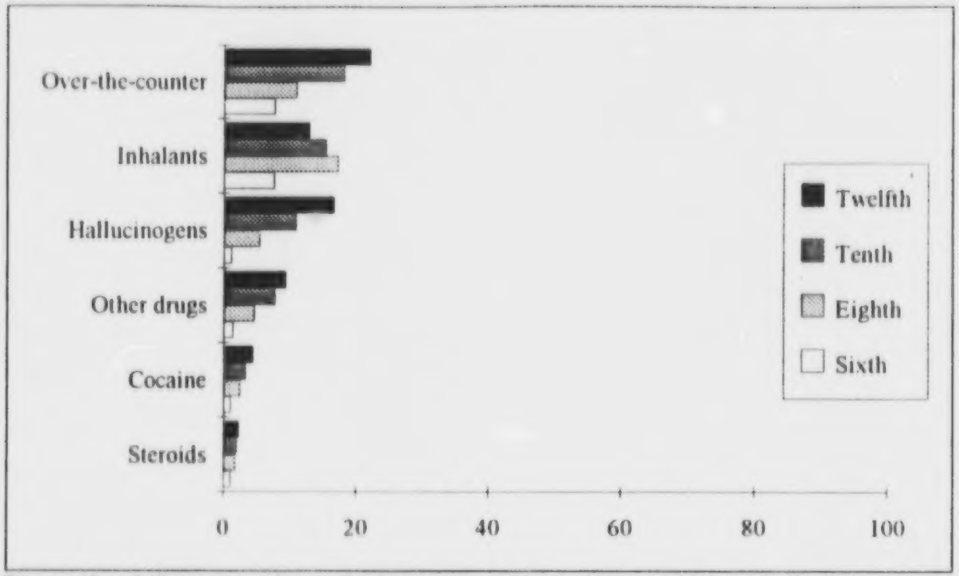

Figure 1b. Lifetime prevalence of substance use 6th, 8th, 10th and 12th grade Washington students (Lower prevalence substances)

Since some students use more than one form of alcohol, the Alcohol Use scale was used to determine the overall frequency and quantity of beer, wine or hard liquor consumed. Some form of alcohol has been tried by 33 percent of the sixth graders, 55 percent of the eighth graders, 70 percent of the tenth graders and 80 percent of the twelfth graders (see Figure 2). As mentioned earlier, these figures represent consistent declines for eighth, tenth, and twelfth grade students. Figure 2 presents the percentage of twelfth grade students having ever tried four substances.

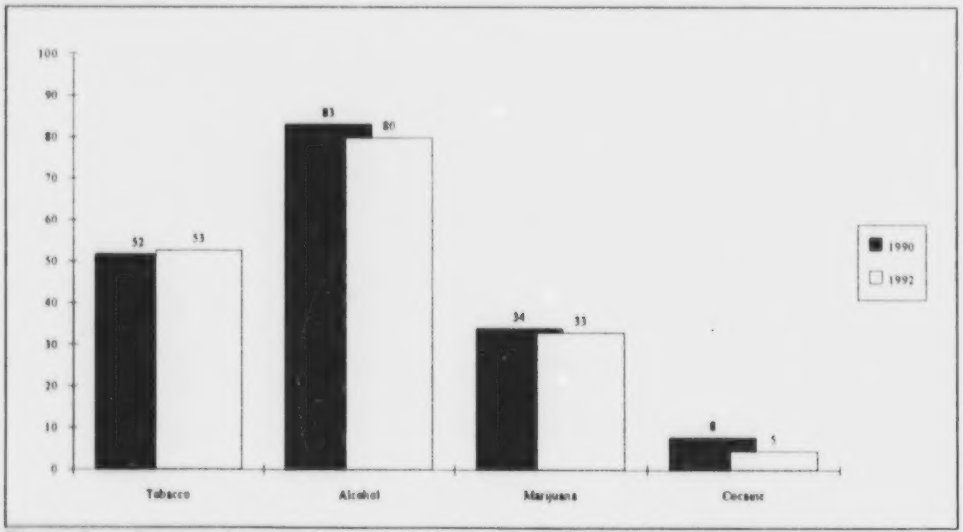

Figure 2. Percent of seniors having ever tried tobacco, alcohol, marijuana or cocaine (Items 24, 30, 31 and Alcohol Scale)

Regular Use

Lifetime prevalence is an important indicator of the initiation of use, but other indicators are needed to explore the level of use and the frequency of use. Current use that goes beyond experimentation may be examined for each substance by determining the percentage who report using a substance six or more times in the last year. This was done by summing the responses for *monthly*, *weekly*, and *daily* use on the survey items.

Since a student may use more than one drug, it is helpful to determine regular use across all forms of alcohol and across all illicit drugs, combining the *moderate* and *high* levels of the Alcohol Use and Drug Use scales. The derivation of these use levels is discussed in Appendix B of this report.

Figure 3 charts the percentage of students reporting using each substance **at least** six times in the last year. These percentages are presented in Table 1. The pattern for regular use of substances is very similar to that of lifetime prevalence, but the overall prevalence is much reduced. More students report use of beer, wine, and hard liquor than other drugs. Many students also report use of smoking tobacco.

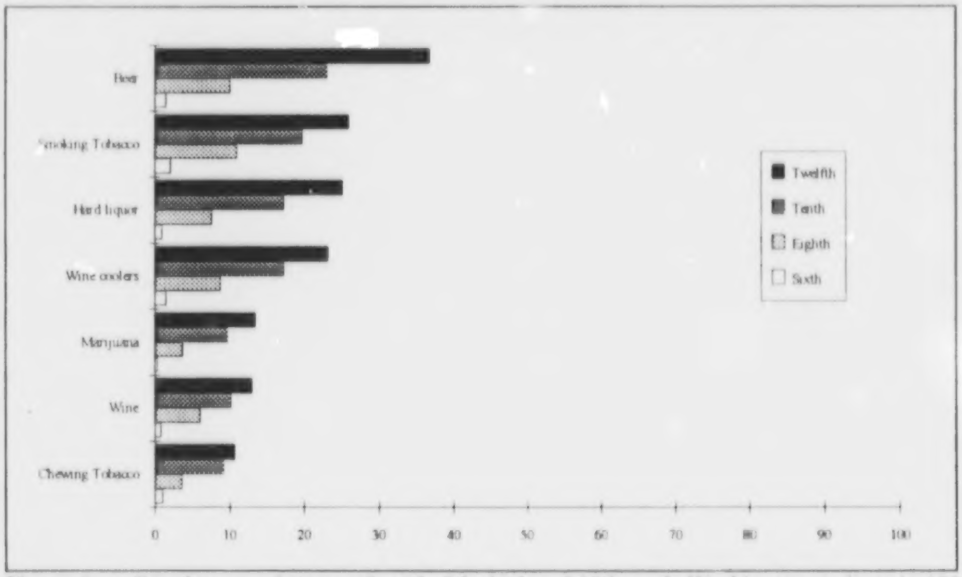

Figure 3a. Regular use substances for 6th, 8th, 10th and 12th grade Washington students in 1992 (Higher use substances).

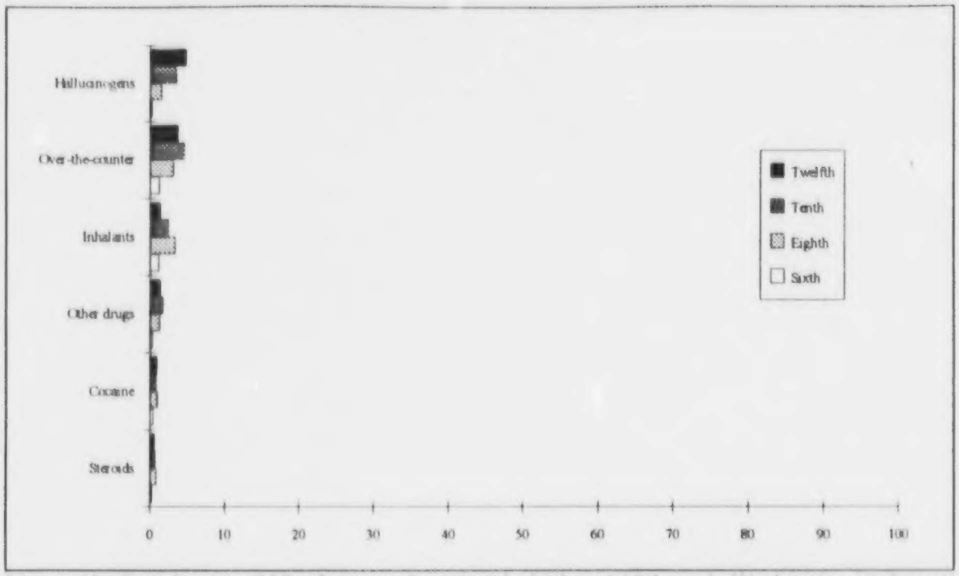

Figure 3b. Regular use of 15 substances for 6th, 8th, 10th and 12th grade Washington students in 1992 (Lower use substances).

Finding: *After a decline from 1988 to 1990, in 1992 regular use of alcohol has remained steady at sixth grade. In contrast, regular use of alcohol has declined at grades eight and ten since 1988, and at twelfth grade since 1990.*

When regular use (i.e., at least six times in the past year) patterns are examined, alcohol use is clearly down since 1988 at eighth and tenth grades, and at twelfth grade since 1990. Importantly, regular use of alcohol at sixth grade remained steady in 1992 following a previous decline from 1988 to 1990. As shown in Tables 2a and 2b, the regular use of most substances by sixth grade students has changed very little since 1988.

Table 2a.
Use of Substance at Least Six Times in the Past Year by Grade and Year
Grades Six and Eight

	Grade 6				Grade 8			
	'88	'90	'92	Change	88	90	92	Change
Smoking Tobacco	2.1	1.4	2.2	0.8	10.3	12.2	11.0	**-1.2**
Chewing Tobacco	0.8	1.0	1.1	0.1	3.5	4.4	3.7	**-0.7**
Beer	3.1	1.7	1.6	-0.1	14.1	12.9	10.1	**-2.8**
Wine cooler[1]	3.2	1.6	1.5	-0.1	14.6	13.0	8.8	**-4.2**
Wine[1]			0.9				6.1	
Hard liquor	1.1	0.9	1.0	0.1	8.8	8.9	7.6	**-1.3**
Marijuana	0.5	0.3	0.4	0.1	5.4	5.0	3.8	**-1.2**
Cocaine (crack)	0.3	0.4	0.4	0.0	0.9	1.3	1.0	-0.3
Opiates[2]	0.2	0.2			0.8	1.1		
Depressants[2]	0.1	0.1			1.0	1.7		
Tranquilizers[2]	0.2	0.0			0.7	1.5		
Hallucinogens	0.3	0.2	0.3	0.1	3.8	3.2	1.6	**-1.6**
Inhalants	0.3	0.8	1.2	0.4	2.2	2.7	3.4	**0.7**
Stimulants[2,3]		0.5				3.2		
Steroids	0.4	0.3	0.3	0.0	1.4	1.3	0.9	**-0.4**
Over-the-counter[3]		1.2	1.3	0.1		4.0	3.2	**-0.8**
Crystal Meth.[2,3]		0.3				1.3		
Other drugs[3]			0.4				1.4	

Note: Changes which are highlighted were significant (*p*<.05).

[1] Wine and wine coolers were combined in previous years

[2] Low incidence drug use questions were combined into the "Other drugs category" in the current survey

[3] Comparative data for 1988 not printed due to substantially different wording of the item

Table 2b.
Use of Substance at Least Six Times in the Past Year by Grade and Year
Grades Ten and Twelve

	Grade 10				Grade 12 [1]		
	'88	'90	'92	Change	'90	'92	Change
Smoking Tobacco	17.6	18.3	19.8	**1.5**	24.5	26.1	1.6
Chewing Tobacco	5.9	7.9	9.3	**1.4**	10.1	10.8	0.7
Beer	28.5	27.6	23.1	**-4.5**	39.9	36.9	**-3.0**
Wine cooler[2]	27.1	25.2	17.4	**-7.8**	32.8	23.3	**-9.5**
Wine[2]			10.3			13.1	
Hard liquor	17.9	19.1	17.4	**-1.7**	25.4	25.3	-0.1
Marijuana	12.3	8.1	9.8	**1.7**	12.8	13.6	0.8
Cocaine (crack)	3.0	1.1	0.9	-0.2	1.8	1.0	**-0.8**
Opiates[3]	1.0	1.1			1.3		
Depressants[3]	1.6	1.2			1.2		
Tranquilizers[3]	1.1	1.1			0.8		
Hallucinogens[3]	2.2	4.3	3.6	**-0.7**	4.3	4.9	0.6
Inhalants	2.7	2.2	2.5	0.3	2.2	1.5	**-0.7**
Stimulants[3,4]		3.6			1.3		
Steroids	2.4	1.1	0.8	-0.3	1.3	0.7	**-0.6**
Over-the-counter[4]		5.7	4.6	**-1.1**	5.9	3.8	**-2.1**
Crystal Meth.[3,4]		1.1			1.2		
Other drugs			1.8			1.5	

Note: Changes which are highlighted were significant ($p<.05$).

[1] Grade 12 was not included in the 1988 survey.

[2] Wine and wine coolers were combined in previous years

[3] Low incidence drug use questions were combined into the "Other drugs category" in the current survey.

[4] Comparative data for 1988 not printed due to substantially different wording of the item.

Finding: *Regular use of inhalants has increased slightly among Washington's eighth graders since 1988.*

Finding: *Regular use of both smoking and chewing tobacco has increased among Washington's tenth graders since 1988.*

The regular use of many substances has decreased among eighth and tenth graders since 1988. Exceptions to this are a slow but steady increase in the rates for inhalant use by eighth graders and tobacco (both smoking and chewing) use by tenth graders. As gateway drugs, the regular use of these substances may portend future use of harder substances for this group of students. Tenth graders actually report less regular use of inhalants than eighth graders, probably since they have more access to marijuana and other illicit drugs.

Finding: *Moderate to high use of alcohol has declined at all grades since 1988.*

Finding: *Moderate to high drug use has remained steady at grades six and eight. At grade ten, high drug use dropped from 1988 to 1990, but increased in 1992. Grade twelve also showed this increase from 1990 to 1992.*

As in 1988 and 1990, Figure 4 shows a clear progression across grades toward higher levels of alcohol use. Nearly 2 percent at sixth grade, 10 percent at eighth grade, 30 percent at tenth grade and 46 percent at twelfth grade report moderate to high use of alcohol. The encouraging sign here is that each of these percentages is smaller than the corresponding percentages in 1988 and 1990 (again, grade 12 students were not included in the 1988 survey). The declines in 1992 may reflect the continued value of the decline shown in 1990. However, it is noteworthy that the trend has leveled at the sixth grade. Given the importance of delayed onset of substance use so clearly established in the literature, this finding calls for continued vigor in providing prevention programs to students in the early grades.

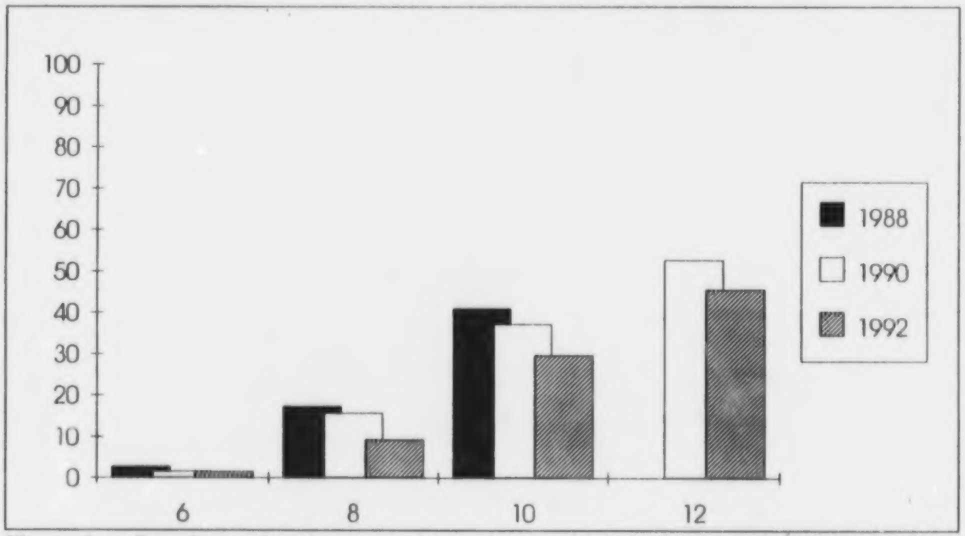

Figure 4. Prevalence of students reporting moderate to high alcohol use (Alcohol Use Scale).

At each grade, more students have also progressed to higher levels of drug use. As shown in Figure 5, less than 3 percent at sixth grade, 9 percent at eighth grade, almost 16 percent at tenth grade and 21 percent at twelfth grade reported moderate to high use of illicit drugs. The trends shown in this figure come in stark contrast to those shown for alcohol use. Moderate to high drug use has remained stable at grades six and eight, and has shown a slight increase at grades ten and twelve.

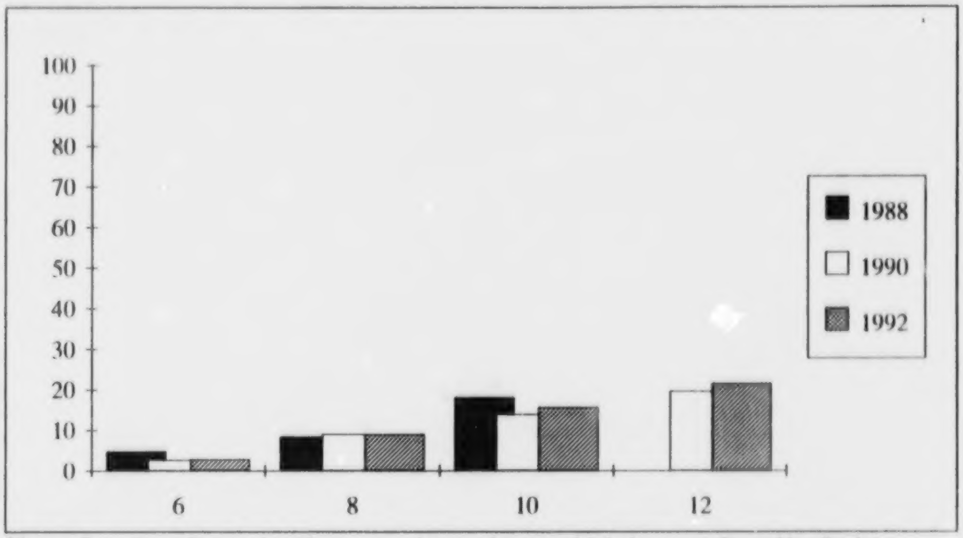

Figure 5. Prevalence of students reporting moderate to high drug use (Drug Use Scale).

Finding: Along with the decline in alcohol use, drinking behavior has also changed somewhat since 1990, although not as much as from 1988 to 1990. Students at grades eight and ten report consuming less when they drink, and their incidence of binge drinking has declined.

To describe changes in drinking behavior more fully, items asking about the quantity usually consumed, frequency of binge drinking, tolerance to alcohol, and age of first drink were examined. The health and safety risks of alcohol use depend as much on these factors as the frequency of drinking.

The incidence of drinking at eighth and twelfth grades has clearly declined since 1988, with higher percentages indicating they "don't drink." Further, those that do drink report consuming lower quantities than their counterparts in 1988 or 1990 on those occasions when they drink (see Figures 6a through 6d). However, these patterns have not changed at either sixth or tenth grades.

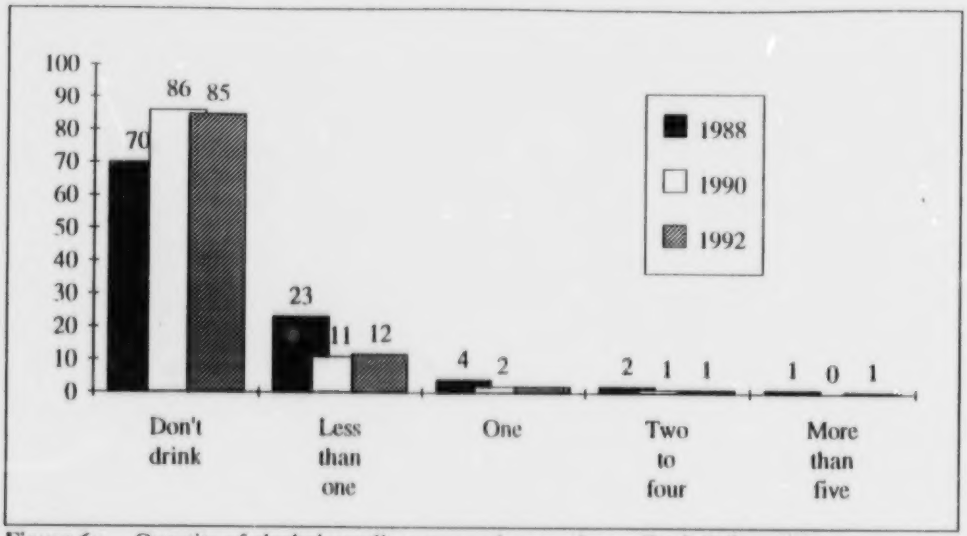

Figure 6a. Quantity of alcohol usually consumed at one time—Grade 6 (Item 48).

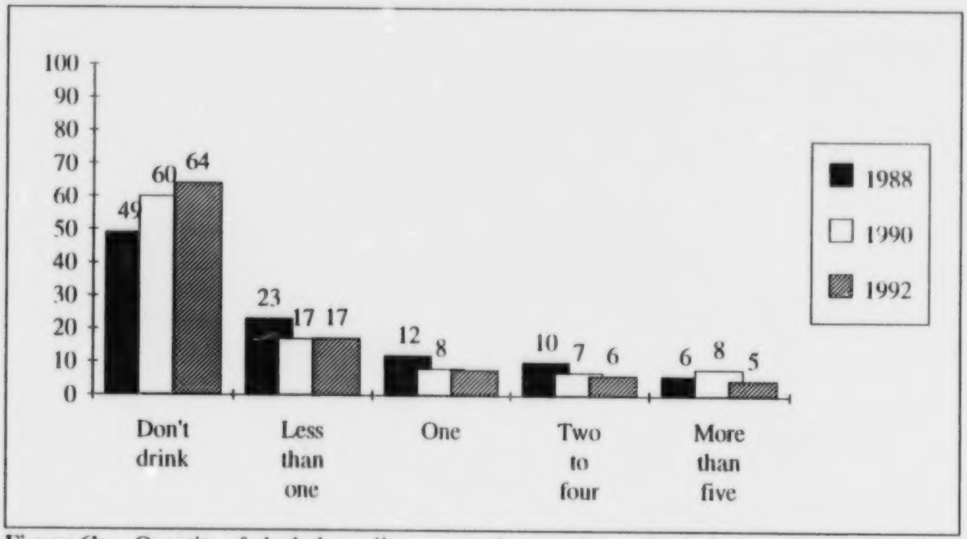

Figure 6b. Quantity of alcohol usually consumed at one time—Grade 8 (Item 48).

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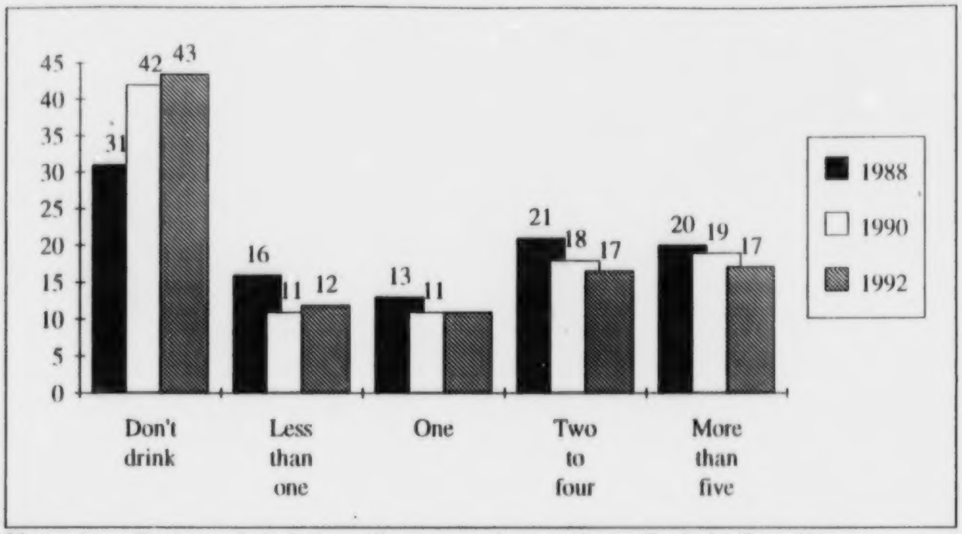

Figure 6c. Quantity of alcohol usually consumed at one time—Grade 10 (Item 48).

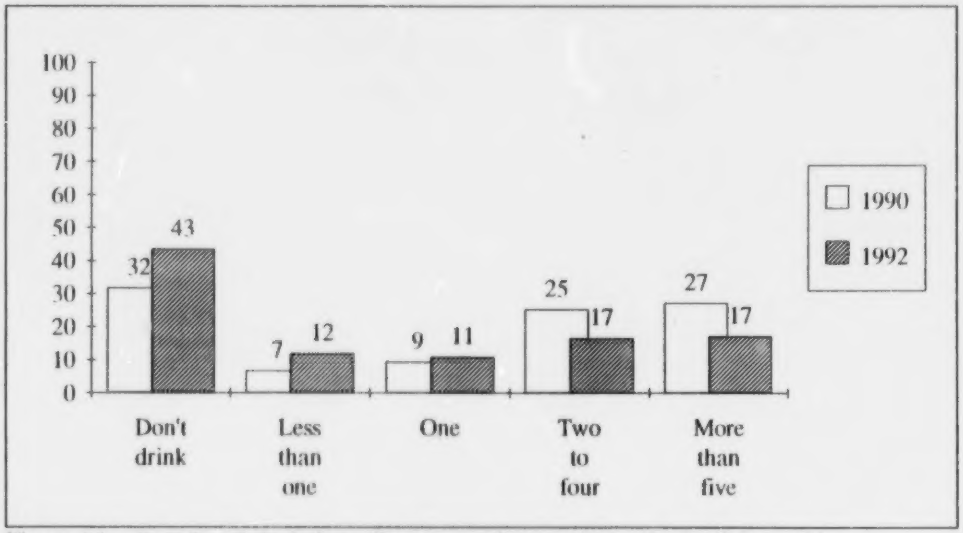

Figure 6d. Quantity of alcohol usually consumed at one time—Grade 12 (Item 48).

To get a better look at these higher quantities of use, the incidence of "binge drinking"—consuming five or more drinks at a single sitting—is displayed in Figure 7. The continued declines at grades eight and ten since 1988 represent important improvements for Washington's students. Binge drinking is an extremely hazardous form of substance use, particularly when combined with driving. In contrast, it is noteworthy that this behavior has not changed at either sixth or twelfth grade.

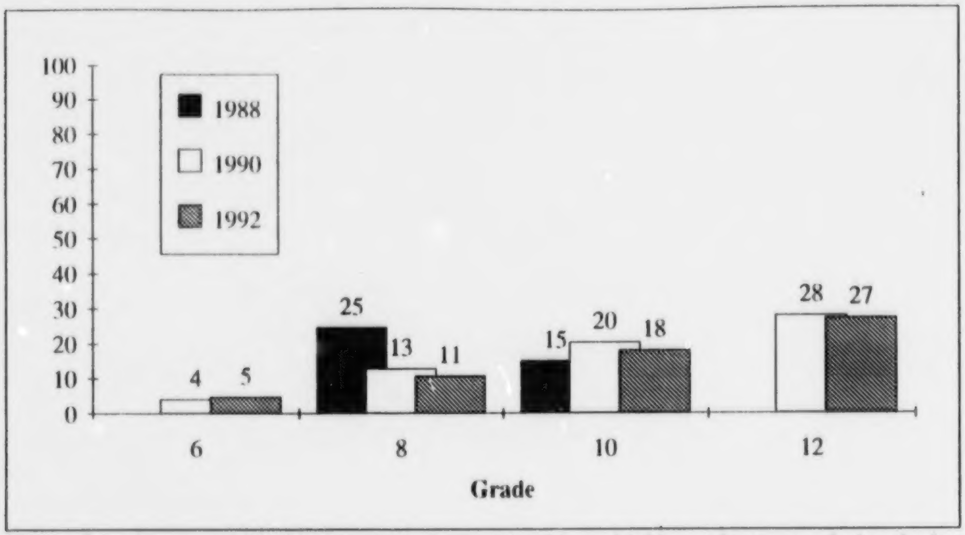

Figure 7. Percent of Washington students reporting binge drinking at least once during the last two weeks, 1988-1992 (Item 50).

Finding: The onset of alcohol use has been delayed substantially since 1988 at all grades.

Students were asked when they had their first full drink of an alcoholic beverage including a can of beer, a glass of wine, or a mixed drink. Figure 8 shows the percentages by grade of the age at which students remember their first full drink.

By the age of ten about one in six students have tried their first full drink of alcohol and by the age of twelve, one in five have tried a full drink. Again, these figures represent improvement over the results in 1988 and 1990. Since early onset of use is one of the strongest predictors of abuse later in life, this improvement is an important achievement for schools, communities and families in Washington.

Although slightly fewer tenth graders than sixth or eighth graders report early initiation of alcohol use, it is not clear whether this indicates that today's elementary students start drinking earlier or that older students tend to forget how young they actually were when they started.

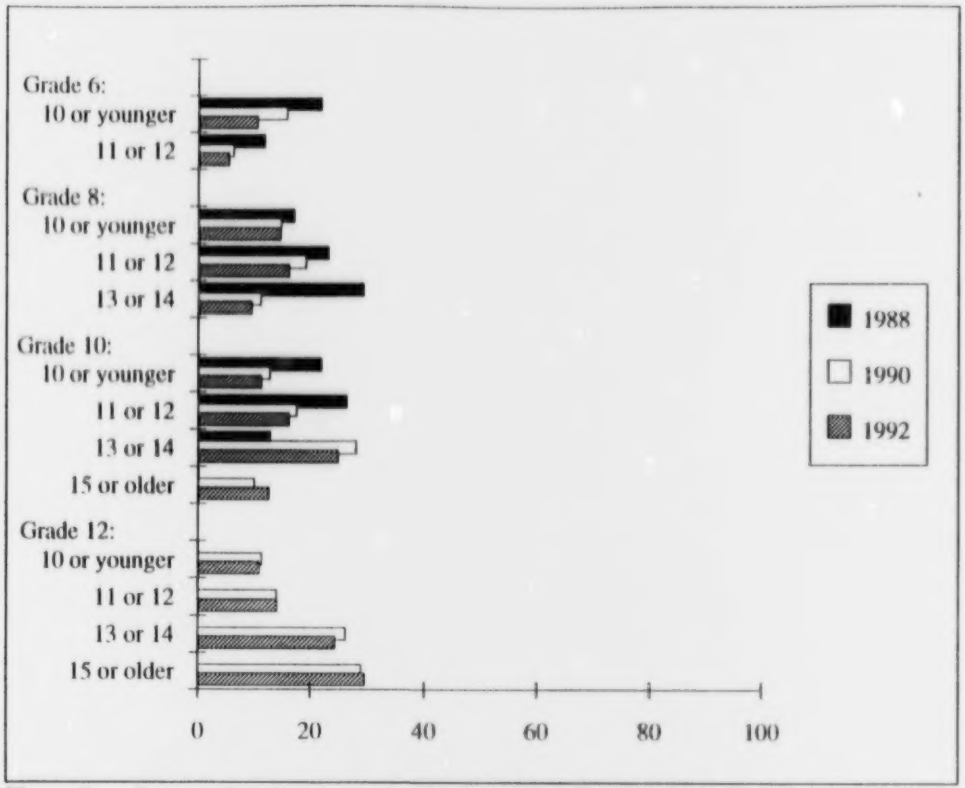

Figure 8. Percent of students reporting the age of their first full drink (Item 49).

Healthy People 2000 Objectives related to this topic area include:

- Reduce the initiation of cigarette smoking by children and youth so that no more than 15 percent have become regular cigarette smokers by age 20.
- Reduce smokeless tobacco use by males aged 12 through 24 to a prevalence of no more than 4 percent.
- Reduce the proportion of young people [aged 12-17] who have [in the past month] used alcohol to 12.6 percent, marijuana to 3.2 percent and cocaine to 0.6 percent.
- Reduce the proportion of high school seniors and college students engaging in recent occasions of heavy drinking of alcoholic beverages to no more than 28 percent of high school seniors and 32 percent of college students.

Substance Abuse

Students who have already reached a high level of alcohol or other drug use require special attention. These students are at greatest risk of experiencing addiction or other health and safety problems from their substance abuse. Typical prevention programs are ineffective with students that have reached this level of use. Schools must implement early intervention strategies to reduce or stop substance use by these students.

Specific criteria as to what level of use constitutes abuse for any particular drug are lacking. For the purposes of this study, *high use* on the Alcohol Use or Drug Use scales will be considered abuse. The decision rules for placing students on these scales were derived based on the literature and review by advisory committees as discussed in Appendix B of this report.

Finding: Alcohol abuse continues to be a problem among Washington's students. Although slight declines in heavy use have occurred at grades eight and ten, a slightly higher proportion of twelfth graders drank heavily in 1992 than in 1990. A conservative estimate is that more than 46,000 students in grades six through twelve are heavy drinkers.

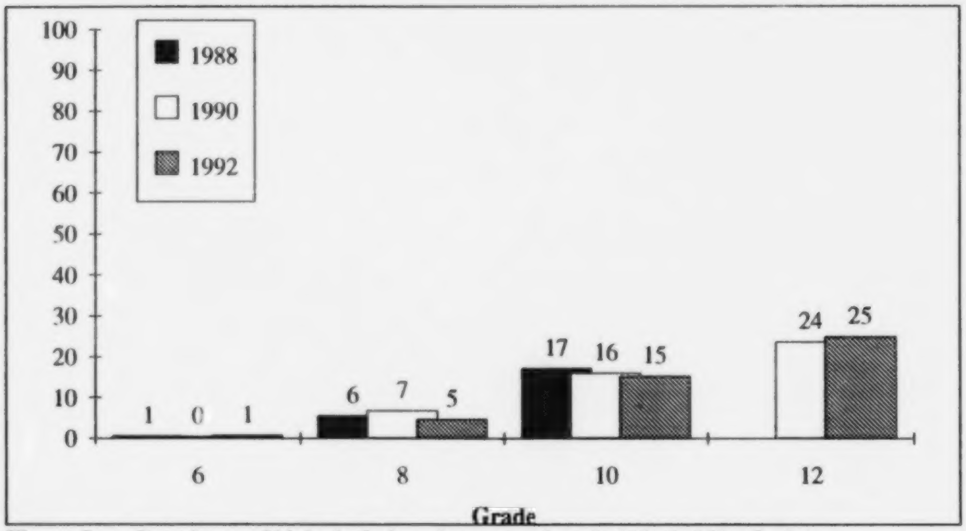

Figure 9. Prevalence of high alcohol use by year and grade (Alcohol Use Scale).

Figure 9 above shows that at each grade more students have reached a high level of alcohol use. At sixth grade less than 1 percent and at eighth grade nearly 5 percent are drinking daily or binge drinking weekly, but by tenth grade one in seven (15 percent) and by twelfth grade one in four (25 percent) report high use. Although these represent slight improvements over the 1990 figures at grades eight and ten, they still highlight a serious problem among Washington's youth.

The number of students statewide that are heavy drinkers can be estimated from the percentage of students with high alcohol use at grades six, eight, ten and twelve. The estimated rates for grades seven, nine and eleven are obtained by simply averaging the grades immediately above and below. The percentages at each grade are multiplied by the statewide 1991 public school fall enrollment. More than 46,000 Washington students (11 percent) in grades six through twelve can be considered heavy drinkers. This represents an increase of approximately 1,000 students from the number reported in 1990, and is a clear reminder of the magnitude of the need for assistance in Washington's middle and high schools.

This is a conservative estimate since the statewide enrollment figures available for this report were for the 1991 school year, and statewide enrollment has been increasing in recent years. In addition, alcohol and other drug use surveys typically underestimate use at each grade level since absent students tend to have higher rates of use and since some students may under-represent their use (Johnston, O'Malley & Bachman, 1989).

Finding: ***The rate of high drug use in Washington has remained essentially unchanged over the last four years. Almost 17,000 Washington students in grades six through twelve may be considered heavy drug users.***

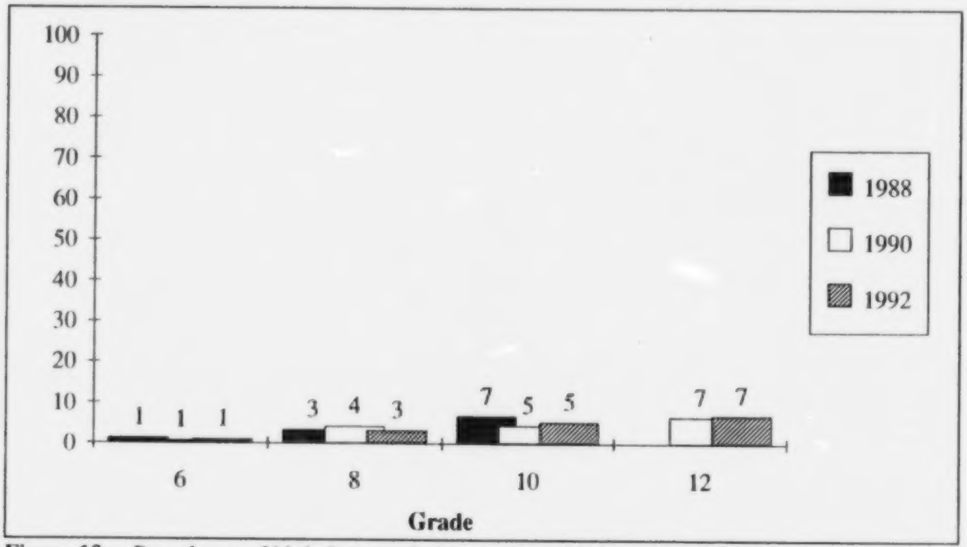

Figure 10. Prevalence of high drug use by year and grade (Drug Use Scale).

Figure 10 above shows the progression of students reporting high drug use across grade levels. At sixth grade fewer than one percent report high drug use and at eighth grade over three percent report high drug use. By interpolating between those grades surveyed, a conservative estimate of the number of heavy drug users can be calculated. The procedures are the same as those discussed for high alcohol use. Almost 17,000 Washington students (4 percent) in grades six through twelve can be considered heavy drug users. Again, this is an increase of 1,000 from the number reported in 1990, and is a graphic reminder of the number of students needing immediate assistance. As discussed above, this is a conservative estimate since the survey underestimates use at each grade level due to the effects of absenteeism and under-reporting.

Patterns of Use

The aggregate results presented above can mask important differences in the use of alcohol and other drugs among students of varying characteristics. In this section, these patterns of use are investigated for students of different gender, ethnic background, geographic location, and urban/rural setting.

> *Finding:* *Sixth grade boys are more likely than girls to have tried alcohol or drugs. By eighth grade, however, girls have caught up and, in fact, surpass boys in terms of lifetime prevalence. Among regular users at grade twelve, boys are almost twice as likely to drink heavily than are girls.*

Table 3 presents the percentage of Washington girls and boys by grade reporting various levels of alcohol and drug use. Percentages have been rounded to whole numbers. Figure 11 displays gender differences in moderate to high use by grade for alcohol and other drugs.

Table 3.
Gender Differences, By Grade
On Selected Indicators of Substance Use

	Grade 6		Grade 8		Grade 10		Grade 12	
	Male	Female	Male	Female	Male	Female	Male	Female
Alcohol Use Scale								
Lifetime prevalence	38%	29%	55%	56%	67%	70%	78%	83%
Low	35%	28%	45%	48%	39%	41%	31%	40%
Moderate	1%	1%	5%	5%	10%	17%	17%	27%
High	1%	0%	5%	3%	18%	11%	30%	17%
Drug Use Scale								
Lifetime prevalence	11%	8%	21%	24%	33%	30%	37%	38%
Low	7%	6%	12%	16%	17%	17%	16%	16%
Moderate	2%	2%	5%	5%	10%	9%	13%	16%
High	1%	1%	4%	2%	6%	4%	8%	5%

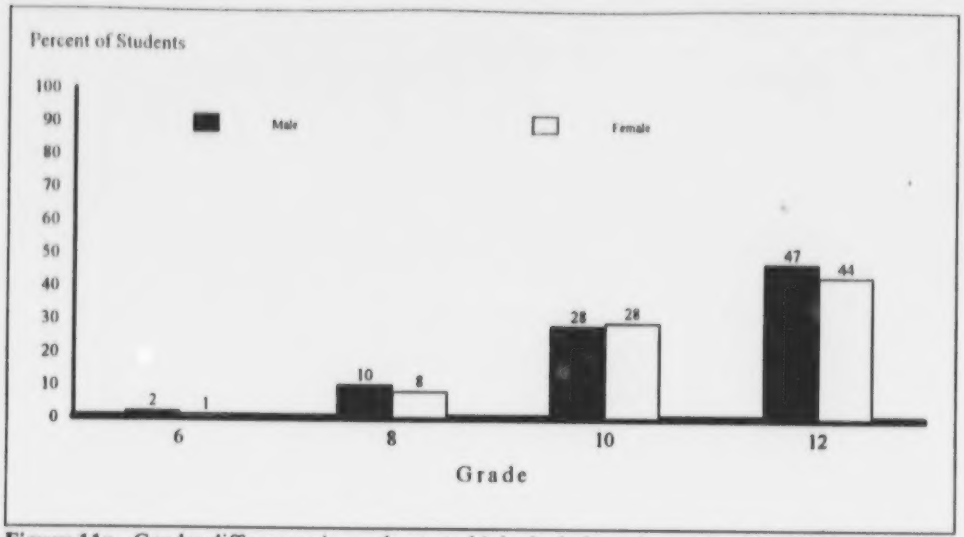

Figure 11a. Gender differences in moderate to high alcohol use, by grade (Alcohol Use Scale).

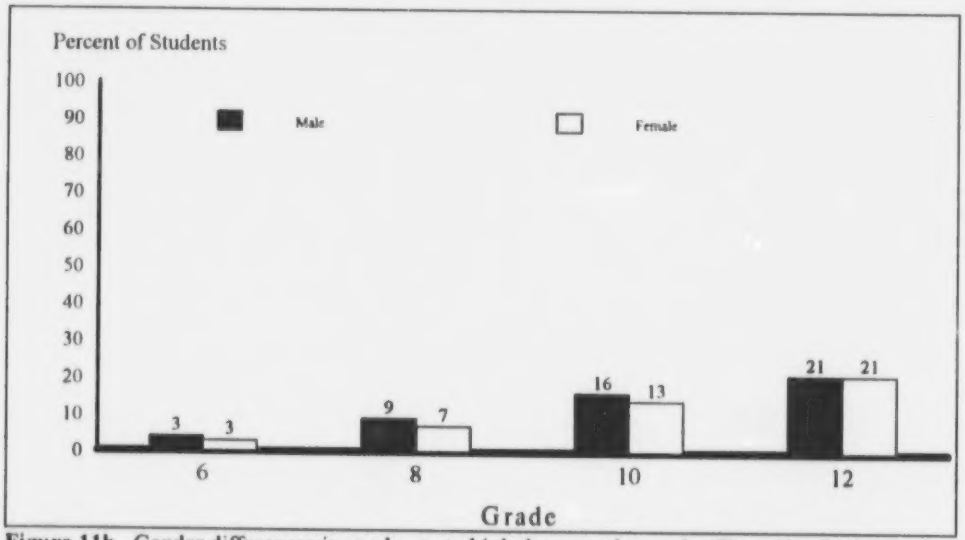

Figure 11b. Gender differences in moderate to high drug use, by grade (Drug Use Scale).

As shown in Table 3, more sixth grade boys than girls report having tried alcohol but girls have caught up by eighth grade. In terms of moderate to high use of alcohol, boys exhibit slightly higher use rates, but these differences are minor.

More sixth grade boys than girls also report having ever tried illicit drugs but again girls have caught up by eighth grade. As displayed in Figure 11, the differences in moderate to high drug use are even smaller than those reported for alcohol.

The "moderate to high" level of use is featured in Figure 11 for consistency with other alcohol and drug use findings presented in this report. But in this case, it masks an important gender difference, at least among high school students. It is clear from Table 3 that girls are the more moderate users and boys the high users, particularly for alcohol. In fact, boys are about twice as likely as girls to be high users.

The tendency for high school boys to be heavier users of alcohol is displayed in Figure 12, using other data from the survey. Students were asked the amount they usually consumed when they drank. As suggested by the Alcohol Use Scale data in Table 3, more girls are shown to drink at moderate levels (up to one drink per occasion) than boys. In high school, a higher proportion of girls drink 2-4 drinks than do boys. But the heaviest drinking—more than 5 drinks at one time (binge drinking)—is clearly more in evidence among boys than girls.

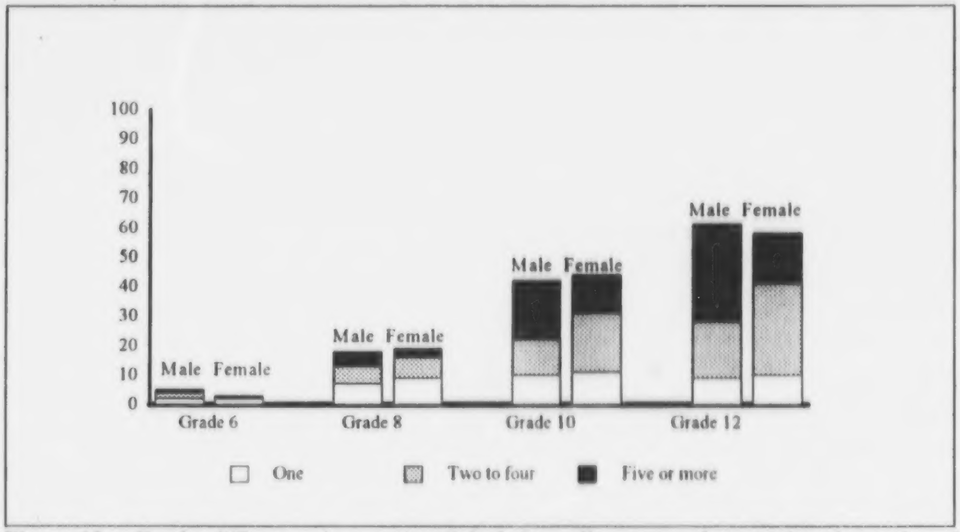

Figure 12. Gender differences in quantity of alcohol usually consumed at one time, by grade and gender (Item 48).

Finding: Students with different ethnic backgrounds tend to exhibit different patterns of alcohol and drug use.

Other studies have shown that students with different ethnic backgrounds exhibit different patterns of drug use. In Hawaii, white and native Hawaiian students reported high use of alcohol and drugs while students with Asian background reported relatively low use (Deck & Nickel, 1989b; Gabriel, et al., 1992). In California, white and Native American eleventh graders drank and used marijuana more frequently than other groups, while Asians reported the least use of both substances (Skager, Austin & Frith, 1990). In a series of monographs entitled *Prevention Research Updates*, the Western Regional Center for Drug-Free Schools and Communities has synthesized research on ethnic differences in substance use (Austin, 1988; Austin & Gilbert, 1989; Prendergast & Austin, 1989; Austin, 1990).

Figure 13 displays the percentage of students in each ethnic group reporting moderate to high alcohol or drug use at each grade. Interpretations of differences among non-white groups must be made with caution due to the relatively low numbers of minority students in Washington as a whole (taken together, all four non-white ethnic groups make up about 19 percent of the statewide student population, up from 15 percent in 1990) and in the survey sample as well. For example, the Black non-Hispanic sample in this survey ranges from two percent to five percent of the students surveyed, depending upon grade level. Given the number of students surveyed at each grade, the total Black non-Hispanic sample varies from about forty to just over two hundred students per grade. Thus, a two or three percent discrepancy in use rates for this group may represent only three or four students reporting moderate to high use. Also, there is some difference in the ethnic distribution of the sample and of the population (although similar to the results of previous administrations). Again, this is only to say that generalizations and interpretations of these results need to be made with caution.

At grade six, the use rates are so low, ranging from less than one to four percent of the students, that differences among ethnic groups are well within sampling error and do not merit interpretation. At higher grades, however, the differences become more pronounced. Asian students consistently report the lowest use, typically less than half that of the highest using ethnic groups. Differences among Blacks, Hispanics, Native Americans and White students tend to diminish as students get older. However, Native Americans clearly exhibit the highest rate of alcohol use.

A similar pattern exists for regular use of drugs. Again, sixth grade use is so low that ethnic differences cannot be confidently interpreted. At higher grades, Asian students again exhibit less than half the use rates as the highest using groups at these grades. Again, Native American students report the highest use at each grade.

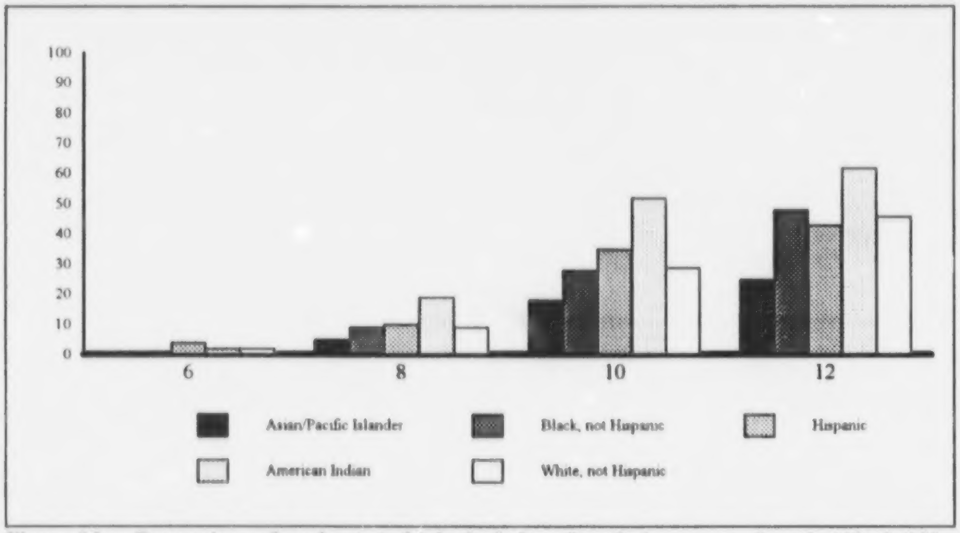

Figure 13a. Comparison of moderate to high alcohol use by ethnic group and grade (Alcohol Use Scale).

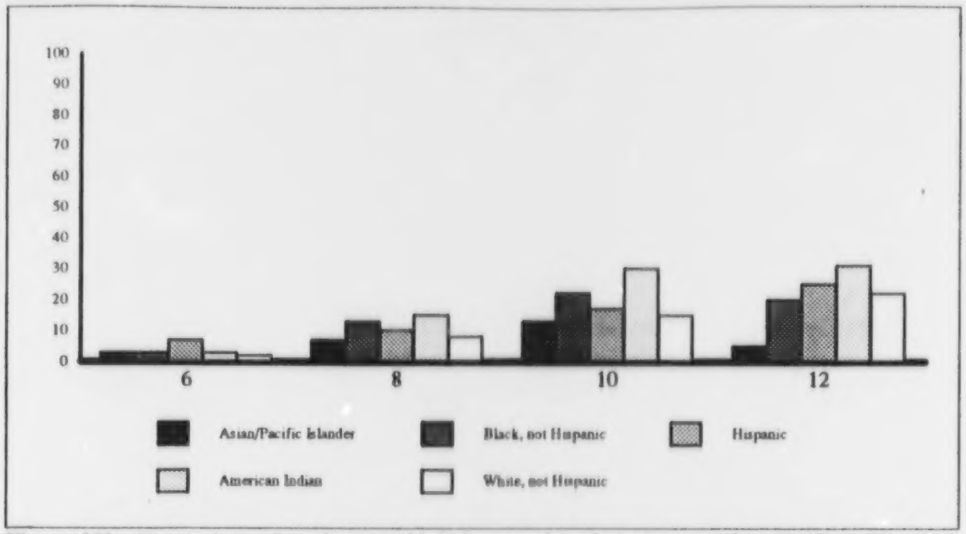

Figure 13b. Comparison of moderate to high drug use by ethnic group and grade (Drug Use Scale).

Finding: Tenth graders in the Central/SE and W/SW regions of the state are more likely to be moderate to high users of alcohol than tenth graders in other regions. In contrast, twelfth graders in the E/NE region are more likely to be moderate to high users of alcohol than twelfth graders in other regions. There is little difference in moderate to high drug use among the four geographic regions within the state.

Figure 14 compares the percentage of students at each grade reporting moderate to high alcohol and drug use in each of the regions of the state. Educational Service District (ESD) service areas were combined to form four regions as close to the same size as possible. These regions were Northeast (ESD 101), Southeast (central and southeast area covered by ESDs 105, 123, and 171), Southwest (the Olympic Peninsula and southwest areas covered by ESDs 112, 113, and 114), and Puget Sound (Metropolitan Seattle and Tacoma within ESD 121, and ESD 189).

Although moderate to high alcohol use among sixth and eighth grade students varies little across the four geographic regions of the state, there are clear differences among regions at the tenth and twelfth grades. Tenth graders in the Central/SE and W/SW regions of the state are more likely to be moderate to high users of alcohol than eighth graders in other regions. In contrast, twelfth graders in the E/NE region are more likely to be moderate to high users of alcohol than twelfth graders in other regions. Moderate to high drug use typically varied across regions by only a few percent of the students at each grade.

Previous survey administrations reported results by region based on a division of the state into five different regions. Due to difficulties with the school participation rate this year, it was necessary to combine the NW and Puget Sound regions. Although this prevents comparisons with previous results for these regions, it was a logically sound combination, considering the geography of the state.

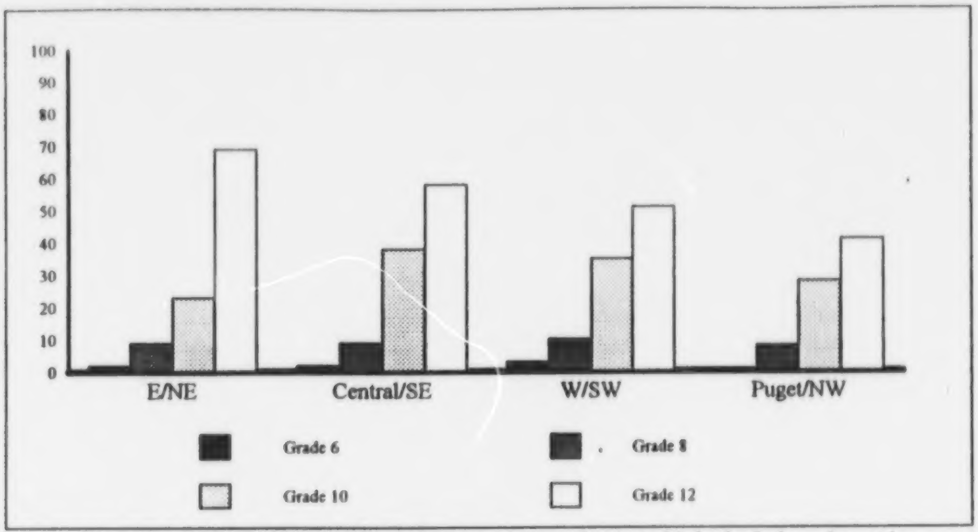

Figure 14a. Percent of students at all grades reporting moderate to high alcohol use by region (Alcohol Use Scale).

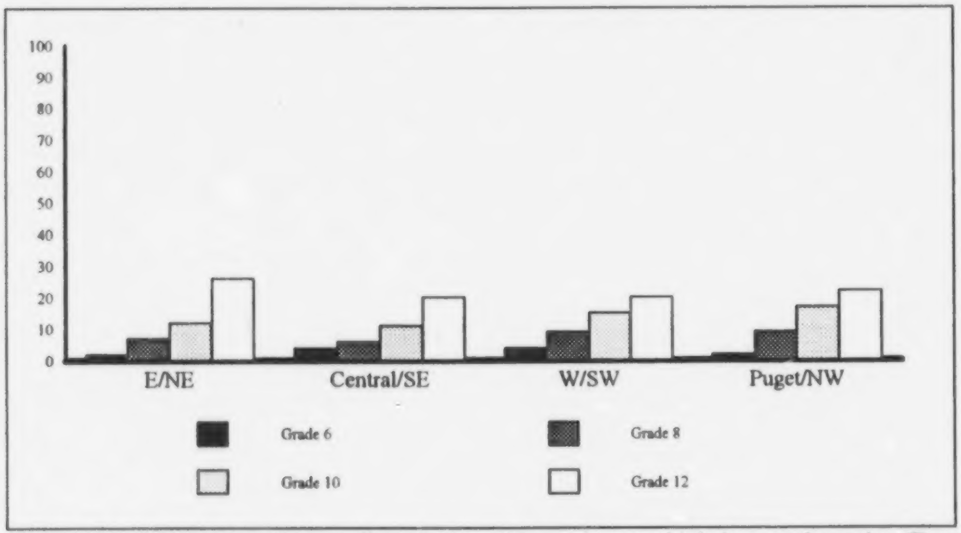

Figure 14b. Percent of students at all grades reporting moderate to high drug use by region (Drug Use Scale).

Finding: Alcohol and drug use is not confined to large urban areas.

In the past, substance use by adolescents was often characterized as primarily a problem found in large urban areas with gang problems. More recently, surveys and research studies have shown that many rural areas are faced with serious problems with drinking and drug use. In a recent GAO report to Congress, the United States General Accounting Office (1990) asserted that "total substance abuse rates in rural states are about as high as in non-rural states."

As in 1988 and 1990, there is little difference in moderate to high alcohol or drug use in rural and urban schools. Figure 15 compares the percentage of students by grade from rural and non-rural schools reporting moderate to high alcohol or drug use. If any differences do exist, it is that tenth and twelfth grade students from rural schools are slightly more likely to report moderate to high alcohol use. In addition, students at these two grades from non-rural schools are somewhat more likely to report moderate to high drug use.

As in the 1988 and 1990 surveys, the only indicators available to distinguish between rural and non-rural schools were at a district level rather than at a school level. School districts with less than 75 percent of residents living in a rural setting based on the 1990 census were classified as non-rural. Unlike previous survey administrations, non-rural schools were not further divided into large and small schools. Although this was an intent of the sampling plan, the school participation rate forced the collapsing of this category.

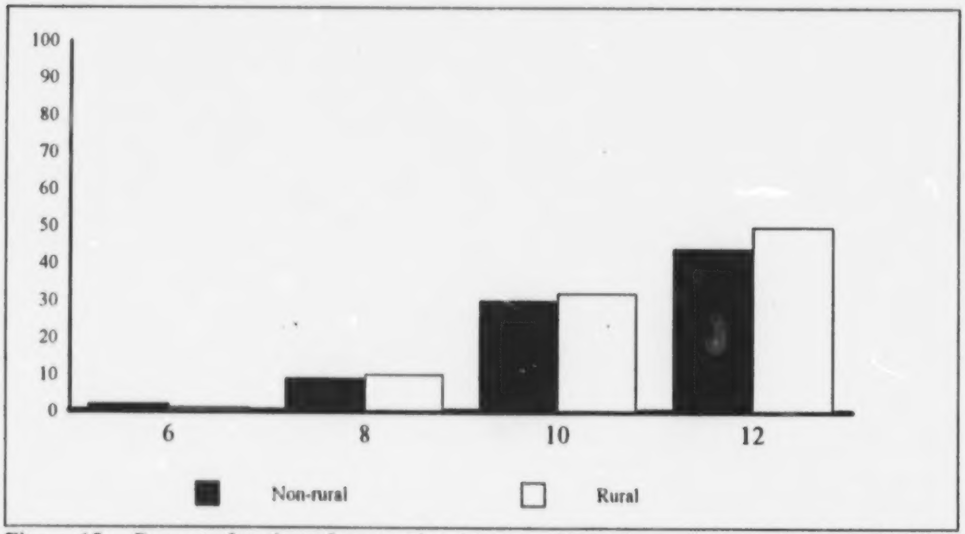

Figure 15a. Percent of students from rural and non-rural schools reporting moderate to high alcohol use (Alcohol Use Scale).

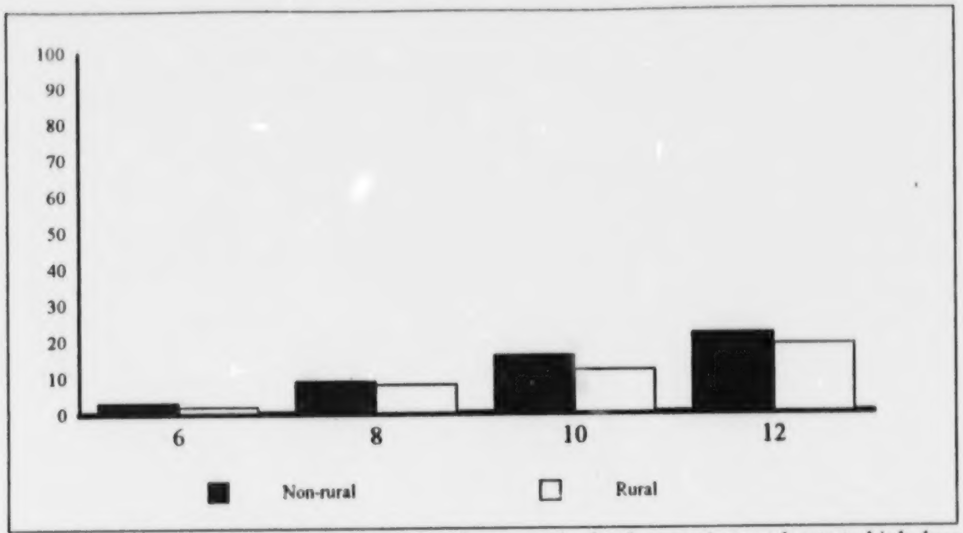

Figure 15b. Percent of students from rural and non-rural schools reporting moderate to high drug use (Drug Use Scale).

Factors Related to Use

Recently, buoyed by research identifying "risk factors" for adolescent drug use (Hawkins, Lishner & Catalano, 1986), prevention efforts have increasingly focused on other behaviors and factors which relate to alcohol and other drug use. Many items in the survey probed these behaviors and activities. Among factors investigated in this section are:

Use by friends and peers

Perceptions of risk in using various substances

Perceptions of parental attitudes toward use

Ease of access to alcohol and drugs

Participation in extra-curricular activities

Educational aspirations

Finding: The opportunities to use alcohol or drugs with friends increase by grade, and are similar to the levels reported in 1990.

Peer influence is thought to be a major factor in initiating and maintaining use of most drugs. This influence may be subtle and students may not admit to it, although a *Weekly Reader* (1991) survey of fourth and fifth graders revealed that many students at this age are already feeling pressure to use alcohol and marijuana. In the present study, students were asked about peer use of drugs and attendance at parties where alcohol or other drugs are served.

Figure 16 shows the increase by grade in the proportion of students who report that "most" or "all" of their closest friends use alcohol at least once a month. This percentage is similar to that reported in 1990. About forty percent of the high school seniors indicate that most or all of their closest friends drink alcohol monthly.

Other substances were also included in these questions. By the twelfth grade, most students have friends who use tobacco (74 percent) or marijuana (57 percent) at least once a month. Both of these figures reflect a six percentage point increase from 1990.

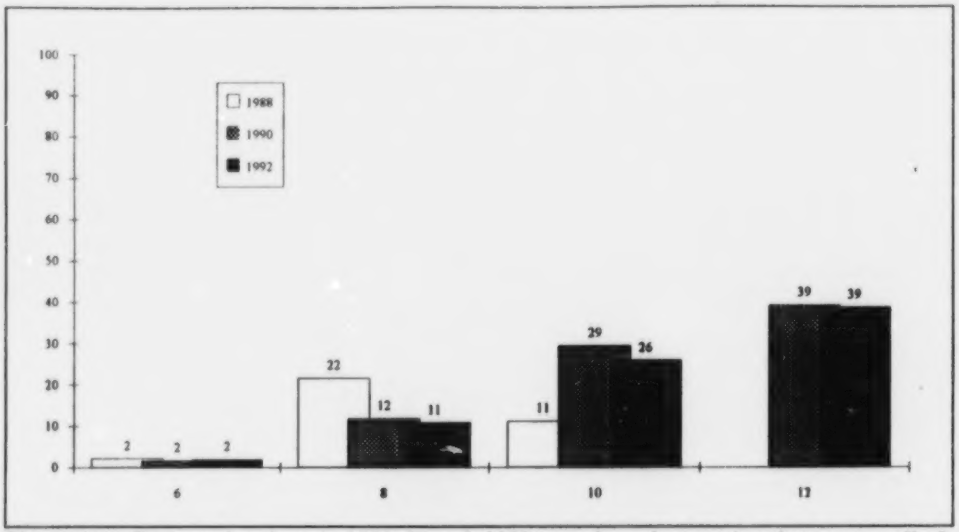

Figure 16. Percent of students in 1988 through 1992 at each grade reporting that most or all of their closest friends use alcohol at least once a month (Item 44).

Figure 17 charts the decrease in attendance at parties where alcohol, drugs, or both are used. Students were asked whether these substances were used at **most** parties they attended. By sixth grade 11 percent responded yes—a dramatically lower percentage than in 1990 at this grade, and a return to the 1988 level. By eighth grade about one-third, and by tenth and twelfth grade well over half (59 percent and 71 percent, respectively) responded "yes". Even though these are large percentages, they represent decreases from 1990. The percentage who report both drug and alcohol use at parties increased from 4 percent at sixth grade to 44 percent at twelfth.

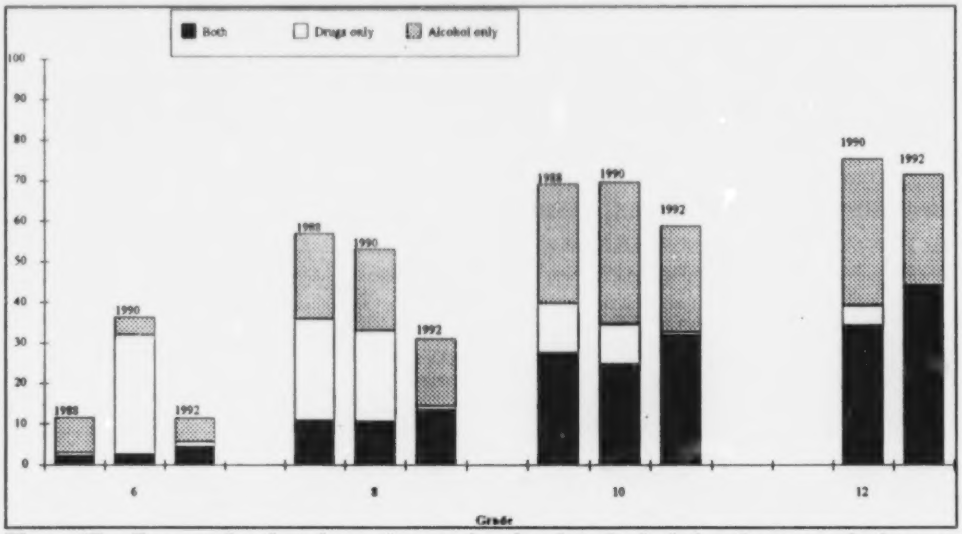

Figure 17. Percent of students by grade reporting that there is alcohol or drug use or both at most parties they attend (Item 18).

Together, these findings suggest increasing exposure to alcohol and drug use through peers and closest friends as students get older. Obviously, this exposure is also associated with pressures to use. With these increased opportunities to use, the previously cited reductions in use rates at grades 8, 10 and 12 since 1988 are even more impressive. Perhaps the current emphasis on teaching decision-making and refusal skills in prevention curricula has had its desired effect.

Finding: ***Students not only perceive an alcohol or drug problem among students attending their school, but also report alcohol or drug use during the school day.***

Increased attention has recently been paid to keeping school buildings and school zones free of the influence of drugs. In 1989, the National Association of Chiefs of Police began the movement toward establishing Drug-Free School Zones in the nation's schools. To determine the effects of substance abuse in the school setting, respondents were asked whether students attending school had a drug or alcohol problem and whether there was alcohol or drug use during the school day.

Figure 18 shows a dramatic increase from sixth to tenth grade in the percentage of students who perceive an alcohol or drug problem among students attending the school. In tenth and twelfth grade, 90 percent say that some or a lot of kids have a problem with substance use. This represents an increase since 1990.

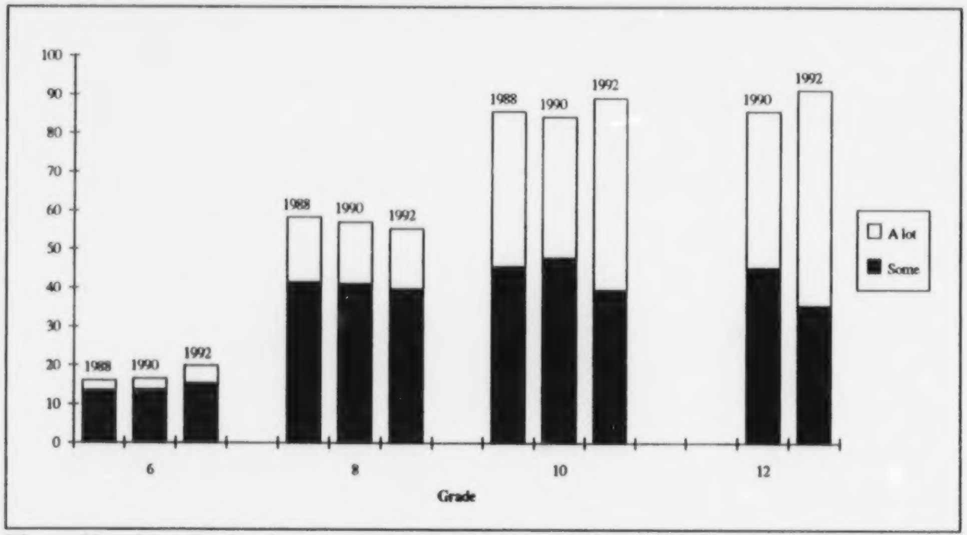

Figure 18. Percent of students by grade perceiving an alcohol or drug problem by some or a lot of students attending the school (Item 15).

When asked whether there was use during the school day, a surprising number reported that there was. Figure 19 shows the percentage reporting substance use during the school day at their school. At eighth grade nearly half (43 percent) report some use at school and by twelfth grade four out of five perceive there is use at school. Although this represents a continued decline at grade eight, it also represents an increase at grades ten and twelve.

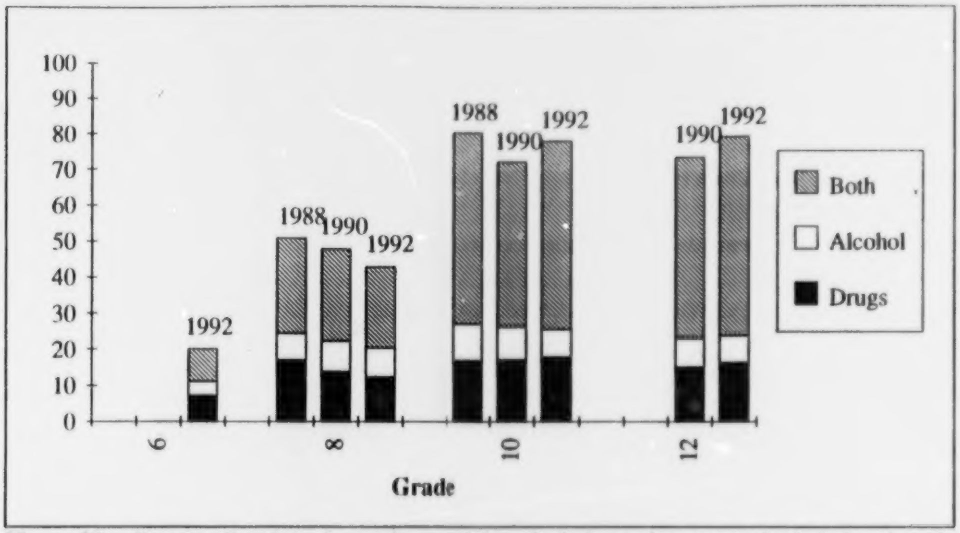

Figure 19. Percent of students by grade perceiving alcohol use drug use, or both during the school day (Item 16).

Finding: *Eighth grade students perceive their parents as more disapproving of alcohol or drug use in 1992 than in 1990 or 1988.*

To determine what kind of message students receive at home, a series of questions probed student perceptions of their parents attitudes about different forms of substance use. In Figure 20, the percentage of eighth and tenth grade students perceiving disapproval from their parents for the following alcohol or drug behaviors is displayed:

Smoking marijuana occasionally

Having one or two drinks nearly every day

Having five or more drinks once or twice each weekend

Attending a party at a friend's home where alcohol was available to you

In general, students indicated that their parents *greatly disapproved* of all of these forms of substance use. At both eighth and tenth grade, approximately eighty percent of students reported extreme disapproval on their parents behalf for their smoking marijuana and daily or binge drinking. As in 1988 and 1990, however, students perceive their parents to be far more tolerant of their being at parties in a friend's home where alcohol is available to them. Given the previous data indicating the quantities of alcohol usually consumed and the prevalence of binge drinking, parents' higher tolerance of attendance at parties where alcohol or drugs are available may reflect a serious lack of awareness on their part about the levels of use of alcohol among their children and peers. This question was not asked of sixth graders, and was asked of twelfth graders only in 1990 and 1992.

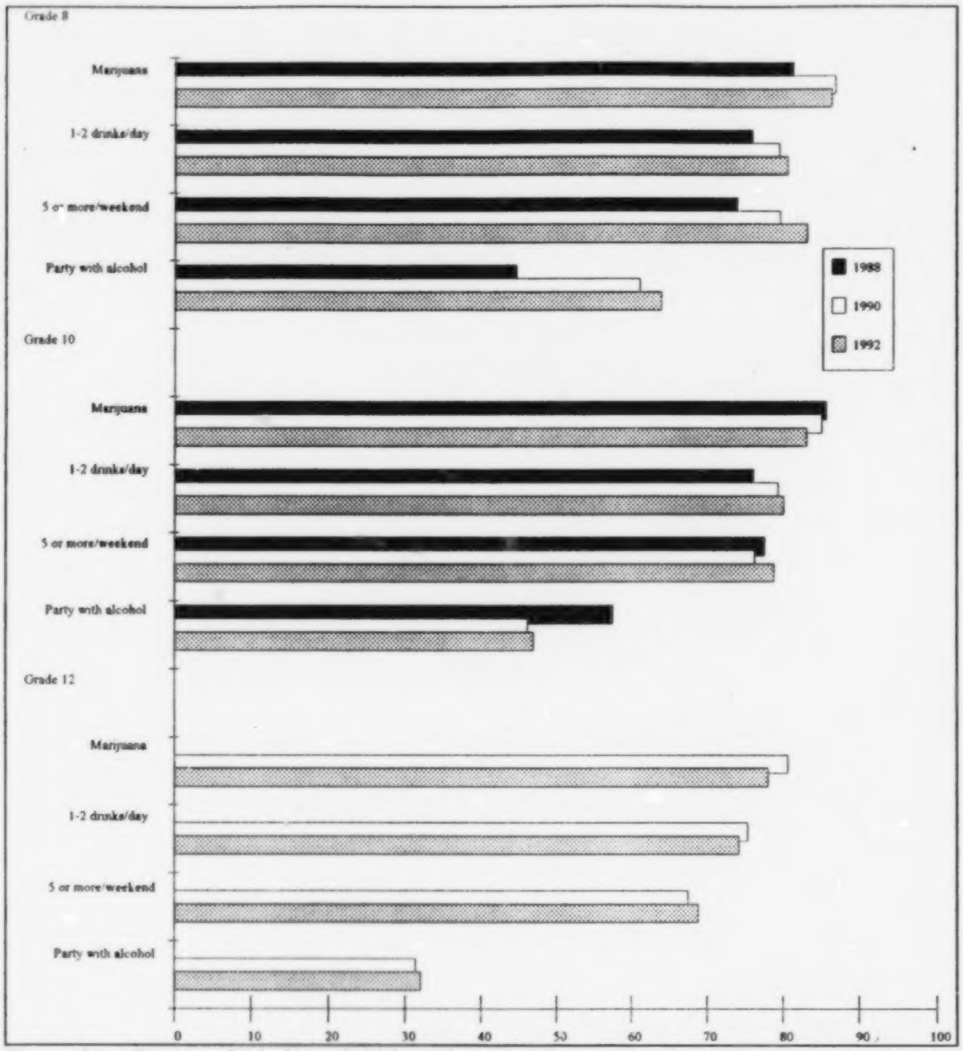

Figure 20. Percent of 8th through 12th grade students perceiving their parents would greatly disapprove of alcohol or drug use (Items 62-65).

Finding: ***Students perceive great risk in drug use behaviors but much less in binge drinking. In general, this perception of risk increases with grade level—high school seniors see the greatest risk in alcohol and drug use (with the exception of occasional use of marijuana). These perceptions of risk are higher than those reported in 1988 or 1990.***

Eighth, tenth and twelfth graders were asked the extent to which people risk harming themselves through various forms of substance use. The differences in their responses to each item as shown in Figure 21 are illuminating.

Interestingly, students perceive greater risk in alcohol and drug use as they get older. In Figure 21, the percentage of students in grades eight, ten and twelve perceiving the six forms of substance use as of great risk is displayed. Only occasional marijuana use fails to follow this trend. Without question, students do perceive the risk of getting AIDS through sharing needles to inject drugs. Seventy to eighty-five percent of the sixth, eighth, tenth and twelfth graders attribute great risk to this.

While the use of tobacco and drugs are seen as highly risky by most students, they generally fail to recognize the health and safety risks of weekly binge drinking. Only about 43 percent of the eighth graders perceive great risk in drinking five or more drinks once or twice a weekend. More students at these grades see great risk in smoking one or more packs of cigarettes a day, smoking marijuana occasionally, and trying cocaine once or twice. Importantly, while there was an increase in the perception of risk for smoking cigarettes and binge drinking from 1990 to 1992, there was a decrease in this perception for occasional use of marijuana or experimental use of cocaine. This increase in perceived risk is most pronounced with respect to cocaine use at eighth grade and marijuana and cocaine at grade ten.

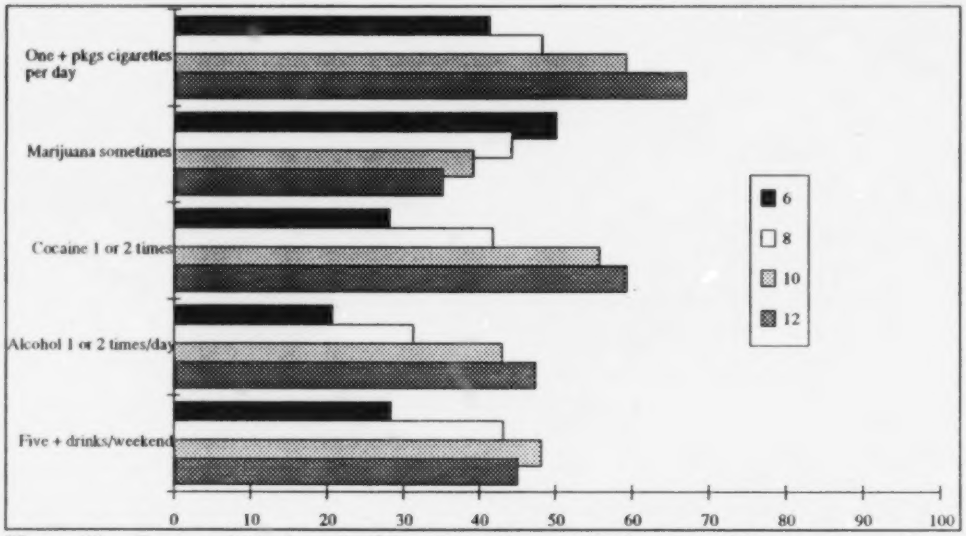

Figure 21. Percent of 6th through 12th grade students attributing great risk to six forms of substance use in 1992 (Items 56-61).

Healthy People 2000 Objectives related to this topic area include:

- Increase the proportion of high school seniors who associate great risk of physical or psychological harm with the heavy use of alcohol to 70 percent, regular use of marijuana to 90 percent and trying cocaine once or twice to 80 percent.

Finding: *Students find it progressively easier to obtain illicit drugs as they get older. In 1990, fewer students reported marijuana and cocaine are easy to get than in 1988. However, this trend was reversed in 1992.*

Figure 22 shows, as grade level increases, students perceive that drugs are increasingly *fairly easy* or *very easy* to get. Although few sixth graders would find it easy to obtain marijuana (15 percent), almost three-fourths of the tenth graders report that it would be easy to get marijuana, and 39 percent that it would be easy to get cocaine. Although these figures declined slightly from 1988 to 1990, they increased in 1992.

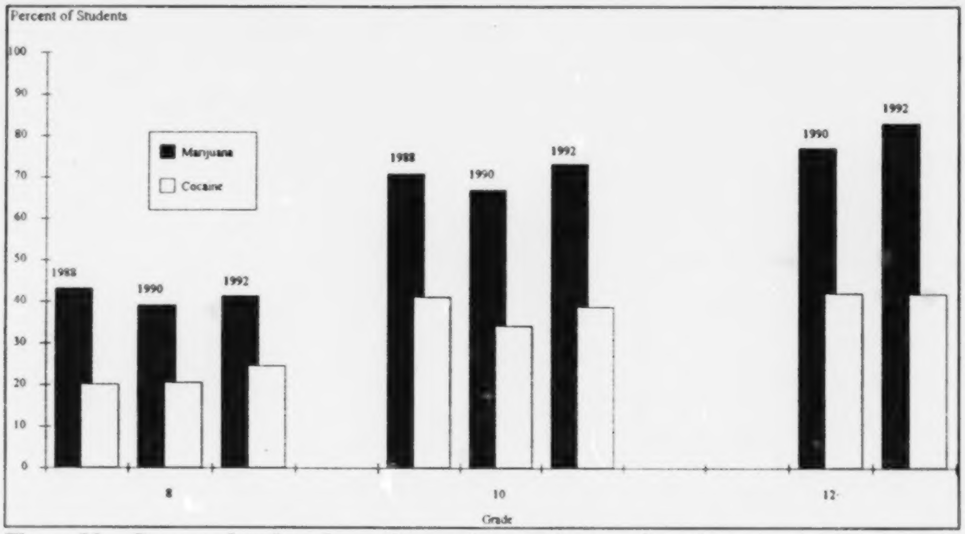

Figure 22. Percent of students by grade reporting marijuana and cocaine are easy or very easy to obtain (Items 22-23).

Students were also asked where they usually obtain alcohol if they drink. In 1988, the majority of students who used alcohol reported they got it from friends, with the exception of grade six students, most of whom indicated that they drank at home and their parents knew about it. These figures remained consistent in 1990 and 1992.

In Figure 23, the source of alcohol is displayed for that proportion of students at each grade who drink. The largest portion of the sixth graders who drink do this at home with parents' knowledge (8 percent, or over half of the 14 percent who drink). At all other grades, the largest percentage of students who drink obtain their alcohol from friends. Beyond eighth grade, progressively fewer students do their drinking at home, with or without parents' knowledge.

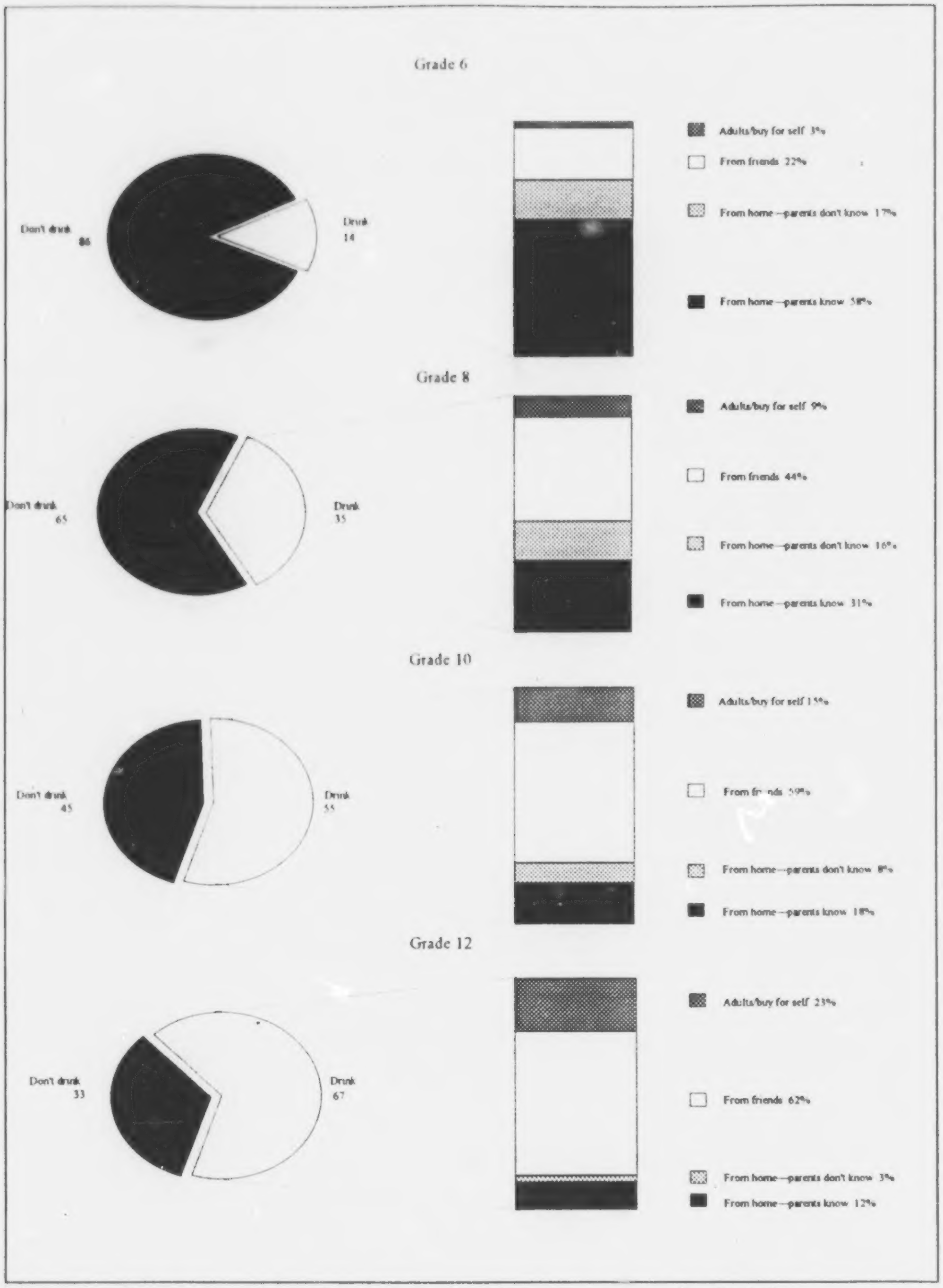

Figure 23. Percent of students who drink reporting the primary source for alcohol

Finding: *As in 1990, students active in extracurricular or after school activities are generally less likely to use alcohol or drugs. For some types of activities, such as sports, however, the pattern is not so clear.*

Students reported the number of extracurricular, non-school and sports activities in which they participate. Extra curricular activities are those occurring at school such as sports, student government, music, etc. Non-school activities are those taking place outside the school setting, such as Little League, Scouts, church youth activities, etc. Students were grouped by the total number of activities in which they participate. Then the alcohol and drug use reported by each group was computed. Figure 24 reports the percentage of students by grade and level of extracurricular activity who report moderate to high use on the Alcohol Use or Drug Use scales.

As in 1990, older students active in extracurricular activities are somewhat less likely to engage in moderate to high drug use than students who do not participate in any activities. Active students were also less likely to report moderate to high alcohol use, but a substantial proportion still report some alcohol use (Figure 24).

The pattern shown in Figure 24 also holds for non-school activities. That is, the more active in these activities a student is, the less likely he/she is to be using alcohol or drugs. Providing alternative drug-free activities is a popular prevention strategy, since research has indicated that one of the reasons students report they use alcohol and drugs is that there is nothing else for them to do (Tobler, 1986). The results shown in Figure 24 support this notion, but a closer look at specific types of extracurricular activities can modify this conclusion somewhat.

One item in the survey asked specifically about the extent of participation in sports teams at school. Although this type of participation in extracurricular activities was embedded in an earlier item (Figure 24), it was also separated to see if this type of activity showed the same pattern with alcohol and drug use. As displayed in Figure 25, it clearly does not. Although the pattern is not entirely even at all grades, there is sufficient indication that increased participation in athletic activities is not associated with a decrease in alcohol and other drug use. It is even possible that this participation, particularly with three or four sports, can be associated with higher levels of alcohol and drug use. This pattern is similar to that reported in 1990, although perhaps not quite as pronounced.

Looking at non-school activities reveals a similar pattern. There is a tendency, especially among older students, to use alcohol more if a student engages in fewer non-school activities. This tendency is weaker when drug use is compared with non-school activities (Figure 26).

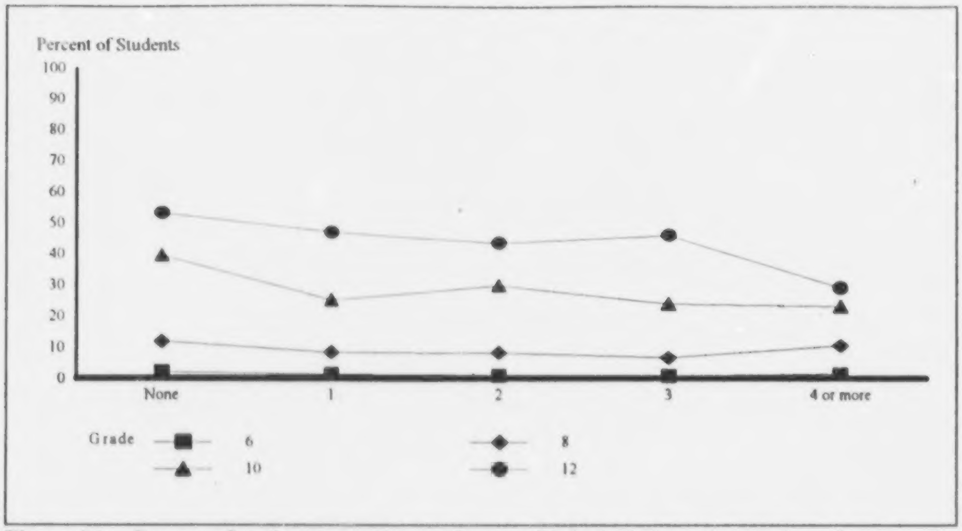

Figure 24a. Percent of students reporting moderate to high alcohol use, by number of extracurricular activities in which they participated. (Item 9, Alcohol Use Scale).

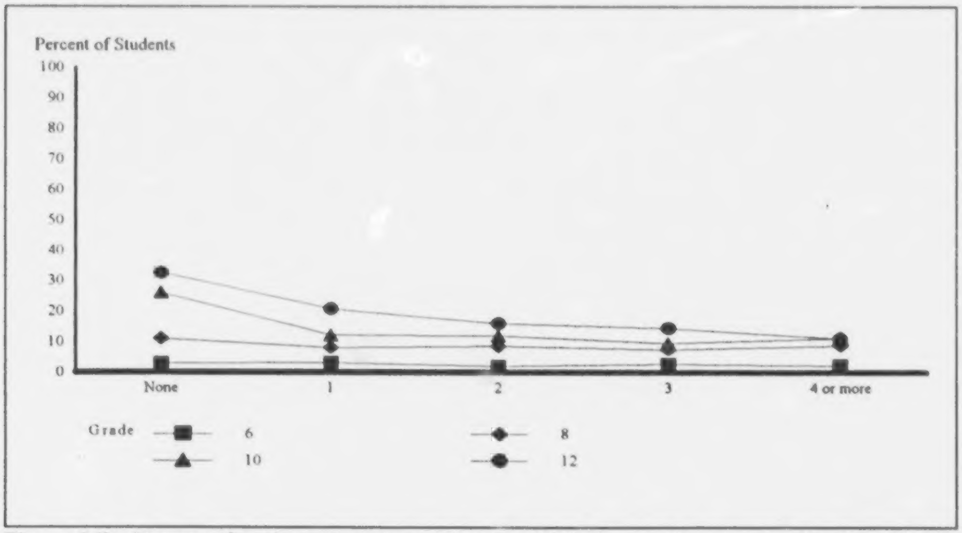

Figure 24b. Percent of students reporting moderate to high drug use by number of extracurricular activities in which they participate. (Item 9, Drug Use Scale).

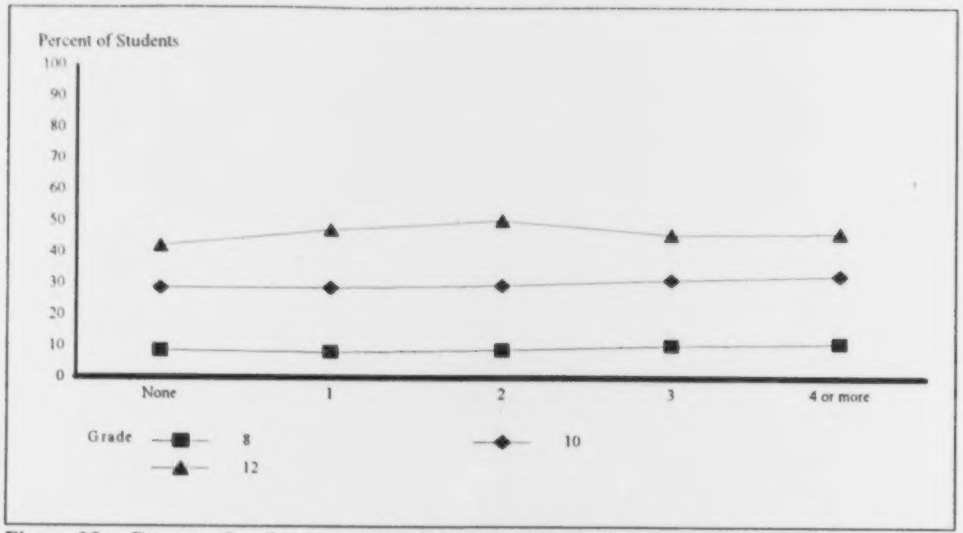

Figure 25a. Percent of students reporting moderate to high alcohol use, by number of school sports activities in which they participated. (Item 11, Alcohol Use Scale).

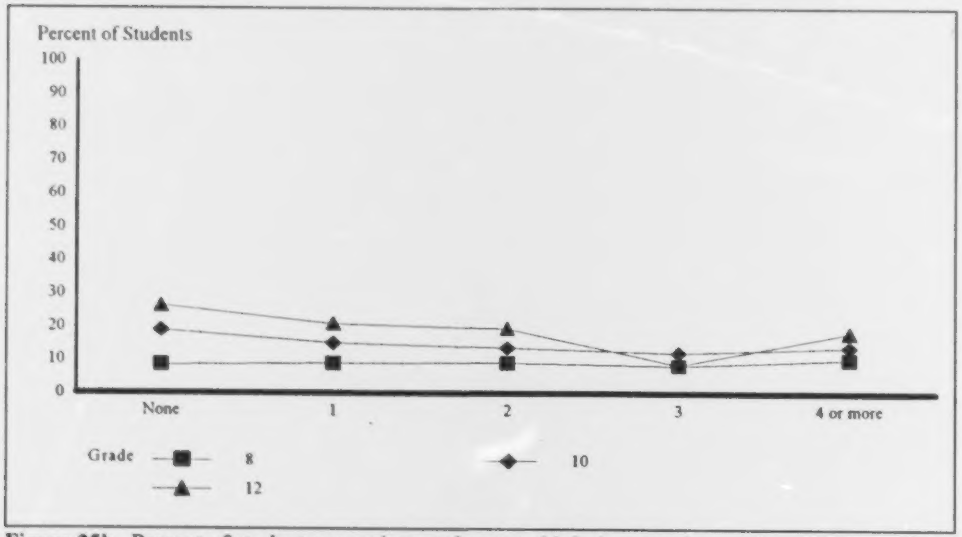

Figure 25b. Percent of students reporting moderate to high drug use, by number of school sports activities in which they participated. (Item 11, Drug Use Scale).

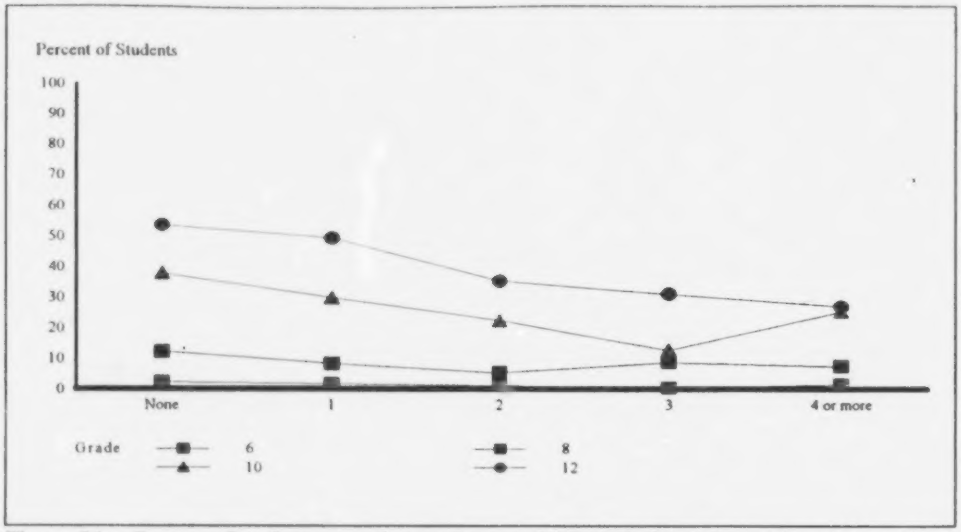

Figure 26a. Percent of students reporting moderate to high alcohol use, by number of non-school activities in which they participated. (Item 10, Alcohol Use Scale)

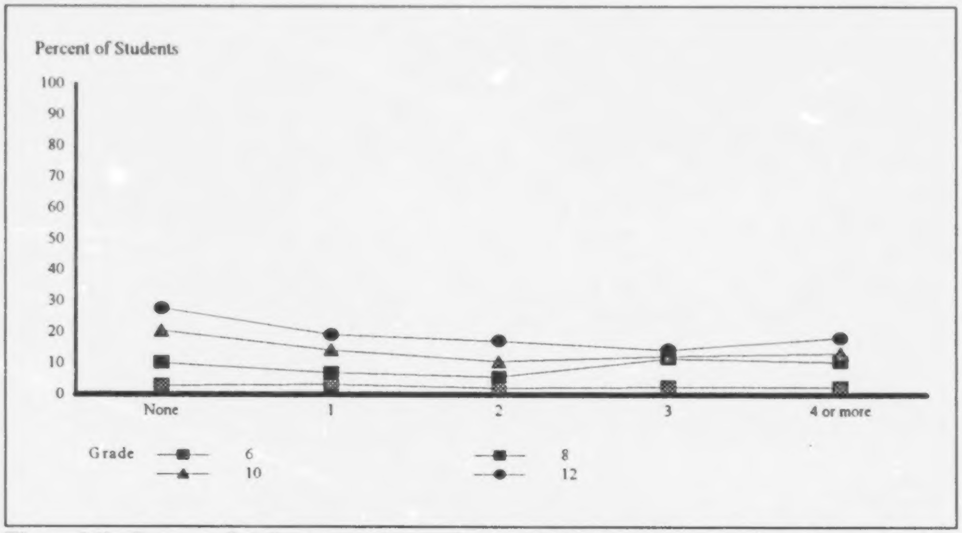

Figure 26b. Percent of students reporting moderate to high drug use, by number of non-school activities in which they participated. (Item 9, Drug Use Scale).

Finding: As in 1990, college-bound students are less likely to use alcohol or drugs.

Students at each grade were grouped by whether or not they anticipated graduating from a four year college. Figure 27 compares the alcohol and drug use for the college-bound and non-college-bound groups.

As in 1990, students who anticipate going to college are much less likely to report moderate to high levels of alcohol or other drug use than those who do not plan to attend. Surprisingly few students, however, reported that they did not anticipate graduating from a four-year college. Almost ninety percent of the students at each grade level indicated that they "probably" or "definitely" would attend and graduate from college.

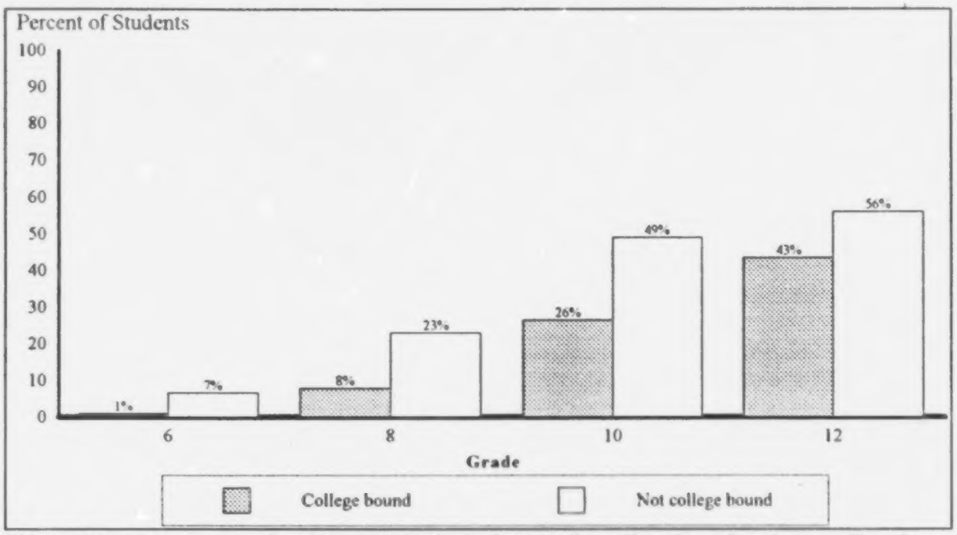

Figure 27a. Comparison of moderate to high alcohol use for college bound and non-college bound students (Item 7, Drug Use Scale).

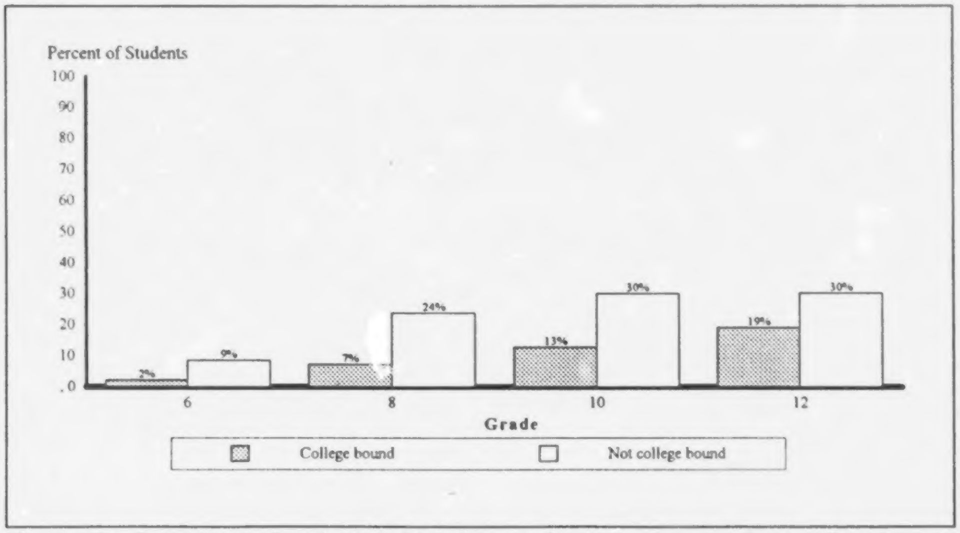

Figure 27b. Comparison of moderate to high drug use for college bound and non-college bound students (Item 7, Drug Use Scale).

Experience with Alcohol and Drug Education

Recently, it has been widely recognized that eliminating alcohol and other drug use among youth is a shared responsibility. The National Commission on Drug-Free Schools has indicated that "in order to be effective, school prevention programs must have the support of the entire community." "Not schools alone" has become a banner under which many states have developed their prevention plans. For example, Community Mobilization Against Substance Abuse has become a major statewide priority in Washington.

Nevertheless, schools play an active role in helping to prevent substance abuse through strong policies, and through comprehensive prevention and early intervention programs. Since 1986, the annual Gallup poll on education has shown that the public views drug abuse as the most serious problem facing our nation's schools.

The last ten years have seen great strides in the implementation of school-based prevention and intervention programs nationwide. *The Drug-Free Schools and Communities Act of 1986*, in particular, has promoted more activity from the educational community. In 1990, certification requirements were added at the federal level to ensure that all educational institutions receiving federal funds would have clear, consistent policies and comprehensive, age-appropriate programs to combat alcohol and other drug abuse.

> *Finding:* *There continues to be an increase in the percentage of Washington students who feel that drug education should begin in early elementary school.*

Students were asked when they felt that alcohol and drug education should begin. Figure 28 displays the distribution of grades recommended by sixth, eighth, and tenth graders in the 1988, 1990, and 1992 surveys. The pattern is consistent across these years. Nearly three out of four students at each of these grades feel that drug education should begin before sixth grade. The highest percentage of students (about 40 percent) feel it should begin at *third grade or earlier*.

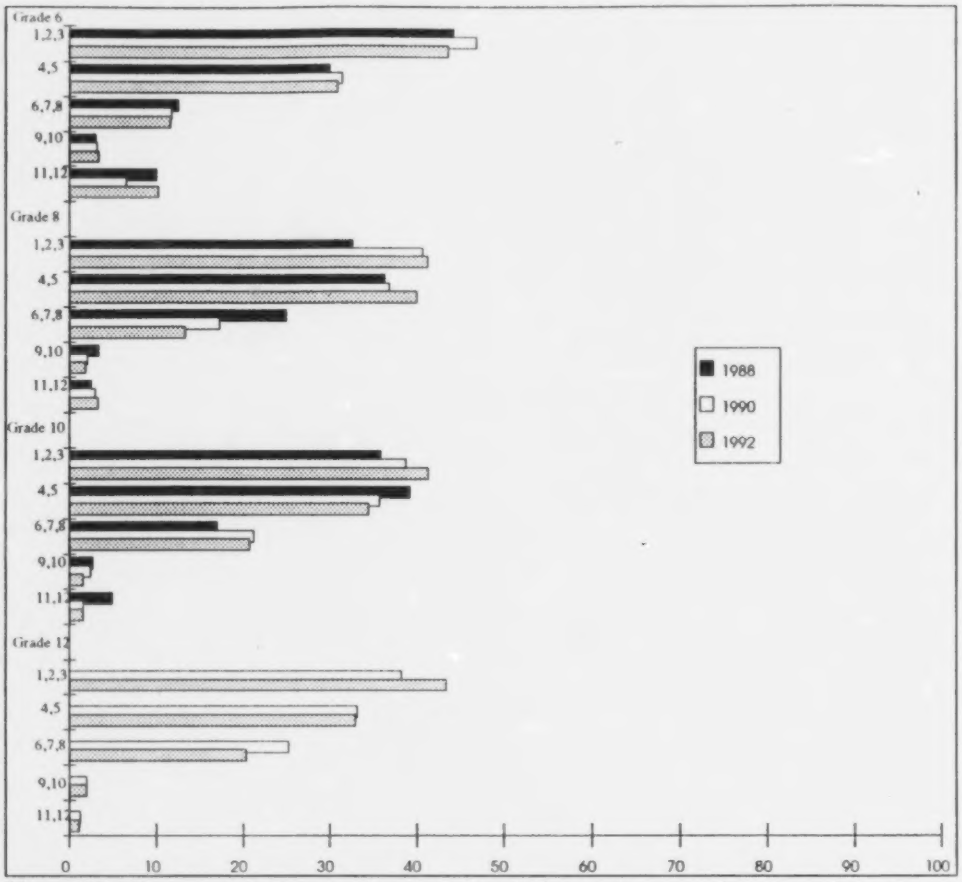

Figure 28. Percent of students in 6th, 8th, 10th and 12th grades suggesting the grade level at which drug education should begin (Item 67).

This concern for early initiation of alcohol and drug education is consistent with the thinking of leading educators in the field. In *What Works: Schools without Drugs* the U.S. Education Department argues for a prevention curriculum that is well articulated from kindergarten through grade twelve. Since that 1986 publication, the Department has published a standard curriculum, specifying goals, objectives and suggested activities for all K-12 Drug-Free Schools and Communities programs. The National Head Start Association has also produced a prevention curriculum to be used at the preschool level (Oyemade & Washington, 1989).

Finding: As in 1988 and 1990, and in even higher proportions in 1992, Washington students find school the most important source of information about the dangers of alcohol and other drugs.

When asked where they have learned the most about the dangers of alcohol and drugs, nearly one-half or more of the students at each grade level indicated *school*. Figure 29 shows the percentage of students by grade selecting family, school, peers, church, or the media as the most important source. As in 1988 and 1990, school was the principal source of information on the dangers of drugs and drinking for students at all grade levels. Family was next in importance at all grades, and media third. While the influence of popular media increases steadily with grade levels in the current survey, it does not surpass that of family at any grade.

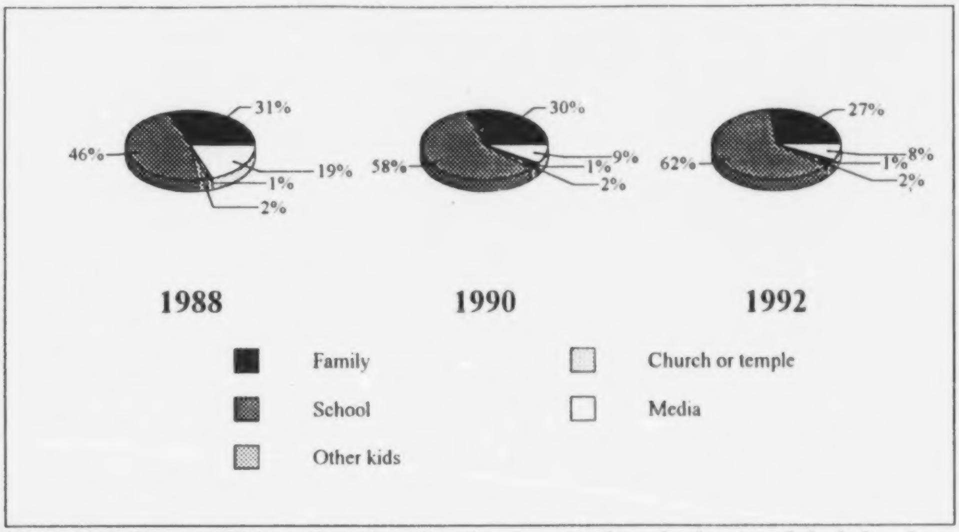

Figure 29a. Percent of 6th grade students learning the most about the dangers of alcohol or drugs from various sources (Item 66).

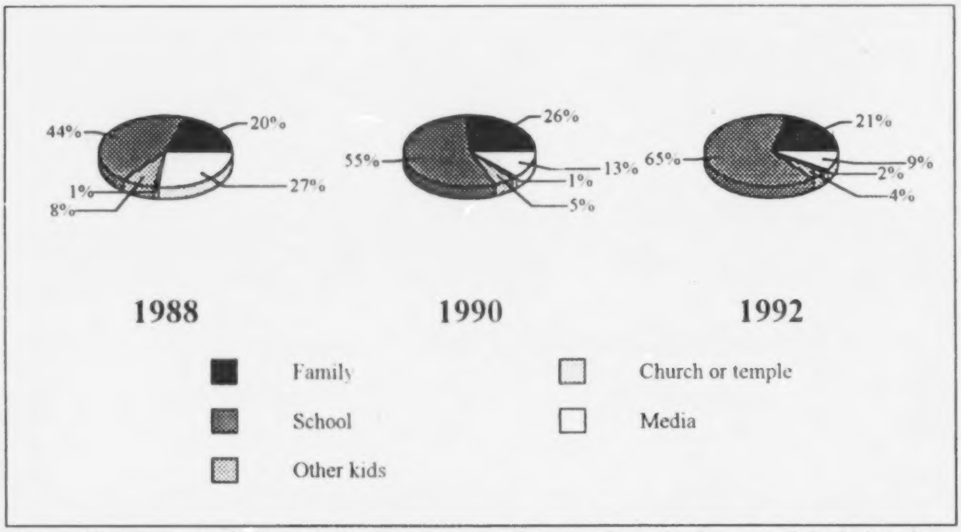

Figure 29b. Percent of 8th grade students learning the most about the dangers of alcohol or drugs from various sources (Item 66).

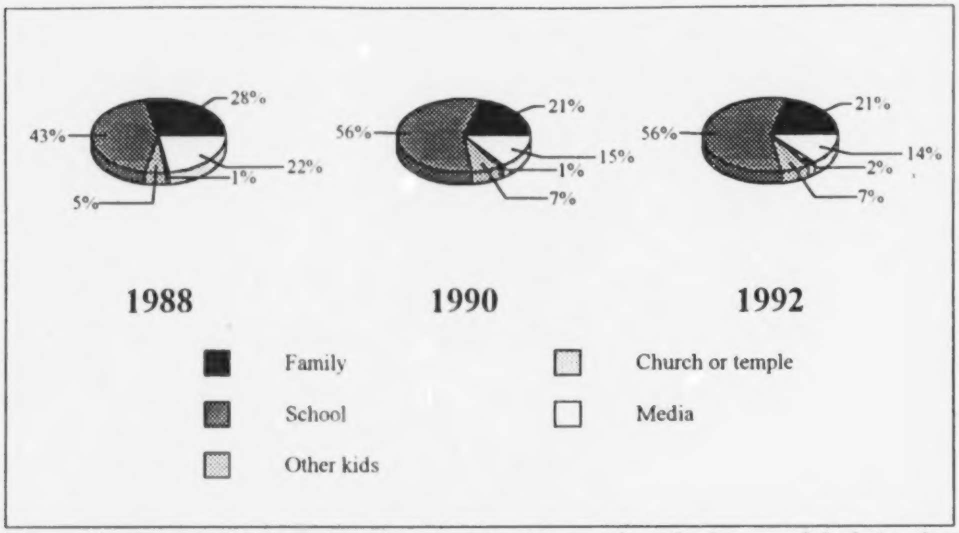

Figure 29c. Percent of 10th grade students learning the most about the dangers of alcohol or drugs from various sources (Item 66).

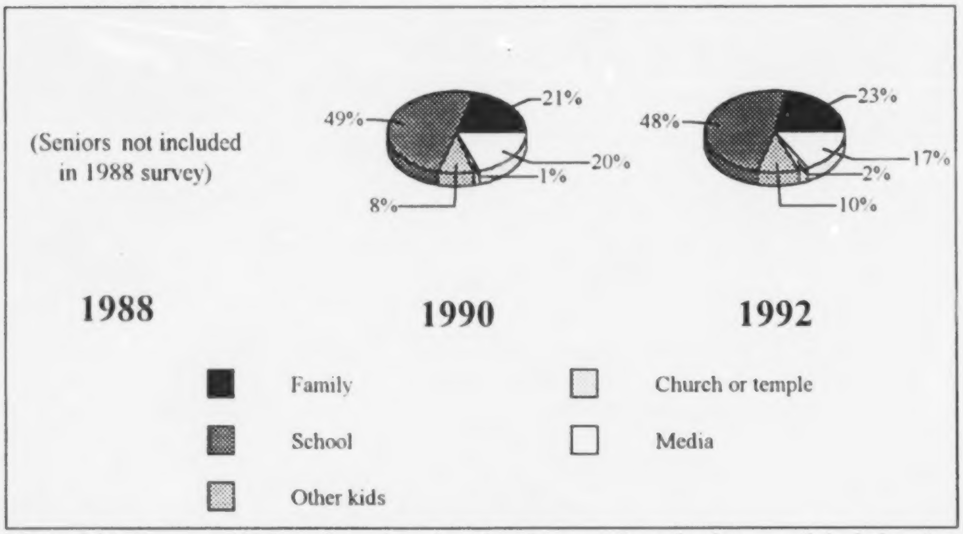

Figure 29d. Percent of 12th grade students learning the most about the dangers of alcohol or drugs from various sources (Item 66).

Finding: *As in 1990, when asked about help available at school for alcohol or drug problems, most students report access to a counselor, many know of peer assistance services, but few are aware of support groups for early intervention.*

As cited earlier in this report, the percentage of students in Washington's schools reporting that they know of friends who may have a problem with alcohol or drug use is not declining (See Figures 16 and 18). When asked about assistance available at their school, as shown in Figure 30, fewer students in eighth and tenth grade report that their school offers a counselor or other staff with whom they could discuss a drug or alcohol problem in 1992 than in 1990, although there was an increase in the percentage reporting that their school offers a peer assistance group. Even so, while nearly three-fourths of the students at these grades indicate that they have this access, only about one-third know of support groups of students with similar concerns to theirs—a slightly higher percentage than in 1990. The current prominence of peer assistance programs is clearly demonstrated, however. The results in Figure 31 indicate that nearly one-half the students at grades eight, ten and twelve know of these programs in their schools. For both support groups and peer assistance services, higher proportions of students report their availability at higher grade levels.

For all three of these services, a rather large percentage of students were not sure whether their schools offered them or not. For example, while only 20 to 35 percent of the students indicated their schools had support groups, as many as 50 percent said "I'm not sure." Especially at the earlier grades, students were less likely to know whether or not their school offered these services. This suggests that even when help may be available, many students have not been made aware of it. Such awareness is obviously crucial and must become a prevention objective in itself.

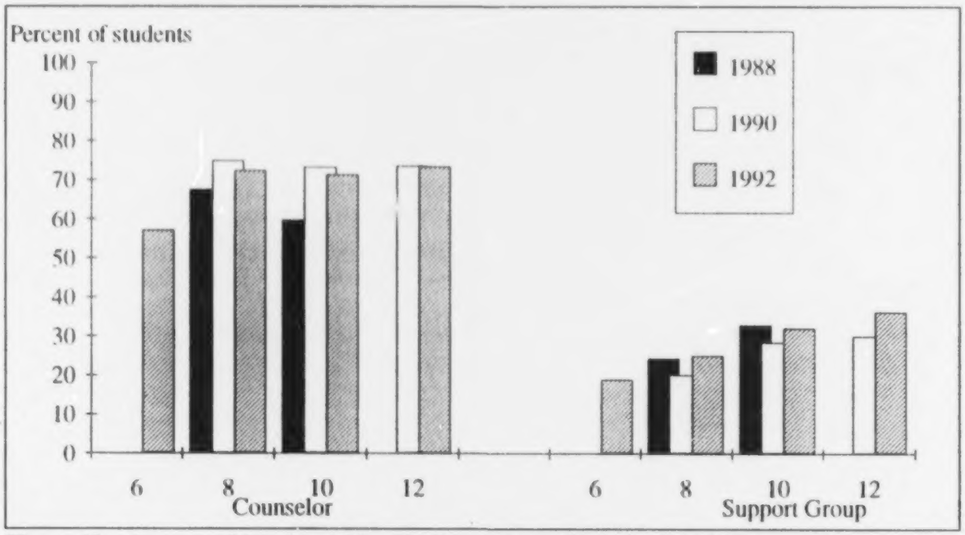

Figure 30. Percent of 6th, 8th, 10th and 12th grade students in 1988, 1990 and 1992 reporting they have access to a counselor or support group in their schools (Items 74 and 75).

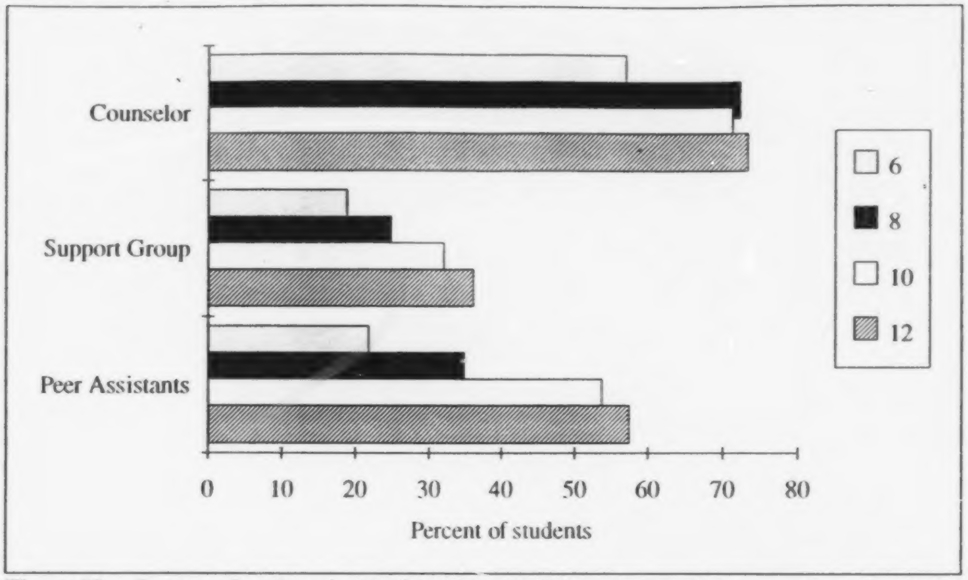

Figure 31. Percent of students in 6th, 8th, 10th and 12th grade reporting access to various alcohol and drug support services in their schools.

Finding: *Sixth grade students think that Drug Abuse Resistance Education (D.A.R.E.) is the prevention program doing the best job of helping stop AOD use in their school. However, almost half of the twelfth grade students believe that nothing is really helping prevent AOD use in school.*

The D.A.R.E. prevention program is one of the most wide spread and highly visible prevention programs offered to elementary school students throughout the state. This program involves a specially trained, uniformed, unarmed police officer who engages youth in a variety of prevention activities. The program is generally very well received, as shown in these survey results. Virtually all sixth grade students (87 percent) thought that D.A.R.E. was the program doing the best job of preventing or helping to stop AOD use at school. While this is not necessarily a testament to the effectiveness of the program, it is certainly a mark of its popularity. Also, only 4 percent of the sixth grade students thought that nothing was really helping to prevent AOD use in school.

Three noteworthy trends in these results may be seen as students increase in grade level. *First*, the higher the grade level, the less likely students were to indicate that they thought D.A.R.E. was the program doing the best job of AOD prevention at school. This is not surprising, though, considering that this program is not provided to older students. *Second*, as grade level increased, so did the percentage of students who thought that peer assistance programs were doing the most to help prevent AOD use at school (from 2 percent at sixth grade to 13 percent at tenth grade). *Finally*, as grade level increased, so did the percentage of students who thought that nothing was really helping prevent AOD use in school, from only 4 percent at sixth grade to almost half (46 percent) at twelfth grade.

Finding: *As students reach higher grade levels, they are less likely to think that classroom presentations are the most important form of prevention programming. Instead, they are more likely to think that student groups are the most important form of prevention programming. Also, as students reach higher grade levels, they are less likely to think that prevention programs can help reduce AOD use.*

Students were asked to choose among a variety of prevention activities which one they thought was the most important in helping reduce AOD use in school among students their own age. While about one-fourth of the sixth grade students indicated that they thought class presentations and having someone at school to talk to were most important, only a little more than one-tenth of the students indicated these two activities at the twelfth grade. Instead, older students indicated that they thought having groups of students working together to persuade other students not to engage in AOD use was the most important form of prevention. Interestingly, at all grade levels about one-fourth of the students thought that bringing people in from outside the school to talk about the problems of AOD use was the most important method of reducing student use.

Also of importance was the finding that older students were far less optimistic about prevention efforts than were younger students. While only 10 percent of the students at sixth grade thought that none of the prevention activities mentioned in the survey could help reduce student use, nearly one-fourth (24 percent) at the twelfth grade did not think that any of the mentioned activities could reduce student use.

Healthy People 2000 Objectives related to this topic area include:

- Provide to children in all school districts and private schools primary and secondary school educational programs on alcohol and other drugs, preferably as part of quality school health education.

Perceived Effects of Media Advertising

Finding: *At grades eight, ten and twelve, two out of three students surveyed thought that alcohol advertising was aimed at both adults and adolescents, and that this advertising influences young people to drink.*

Finding: ***If they were to try to reduce AOD use among young people their age, students at the eighth grade thought it would be most important to eliminate alcohol advertising (27 percent) or provide more school prevention programs (25 percent). Students at twelfth grade thought it would be most important to provide alternative activities (32 percent).***

Media advertising is almost a constant in students' lives. As cited below, students spend a great deal of time watching television, and it is not uncommon for youth to listen to the radio both at home and in the car. Several items were added to the survey this year to obtain students' perceptions of the effects of media advertising.

Students were asked to whom they thought alcohol advertising is aimed, whether or not this advertising influences young people to drink, and whether or not advertising makes drinking more attractive than it actually is. At all three grades asked this question (media questions were not asked of sixth grade students), only about 20 percent of the students thought that alcohol advertising was aimed primarily at adults. Fully two-thirds of the students thought that this advertising was aimed at both adults and adolescents. Among eighth grade students, 76 percent thought that advertising influenced young people to drink, and only somewhat fewer (68 percent) twelfth grade students had this perception. Again, at eighth, tenth and twelfth grades, 86 percent of the students believed that alcohol advertising makes drinking appear more attractive than it really is.

Healthy People 2000 Objectives related to this topic area include:

- Increase to at least 20 the number of states that have enacted statutes to restrict promotion of alcoholic beverages that focuses principally on young audiences.

Reminder to the Reader

The reader is reminded that the Washington State Survey of Adolescent Health Behaviors comprises items from two previously administered surveys, one asking questions about tobacco, alcohol and other drugs, and the other asking questions about other adolescent health behaviors. Up to this point, results for TAOD-related items have been presented, along with comparisons from previous survey administrations. From this point on, however, results for the items related to other health behaviors will be presented. As this administration of the WSSAHB represents the first occasion that data for these items have been collected, only baseline information is available at this time.

Medical and Dental Care

Finding: *The majority of the students surveyed had received a regular medical check-up within the past year, and had seen a dentist (for reasons other than braces) also within the past year.*

Adequate medical and dental care is a prerequisite to students' ability to profit from the school experience. Indeed, poor health is a principal cause of life's difficulties. Given the nature of physical, mental and emotional development, it is especially important that youth receive proper health care.

Students responding to this survey generally had received recent medical and dental attention. For those students at eighth grade and higher, Figure 32 shows that 75 percent had seen a doctor within the last year for a regular physical examination. A similar percentage had also seen a dentist within the past year (Figure 33). Although this percentage was lower at the sixth grade, it was because these students were less likely to remember whether or not they had had this attention. Although small, the percentage of students who indicated that they had never received a regular physical examination (3 percent at sixth grade) or had never seen a dentist (4 percent at sixth grade) is a cause for concern.

Healthy People 2000 Objectives related to this topic area include:

- Increase to at least 95 percent the proportion of people who have a specific source of ongoing primary care for coordination of their preventive and episodic health care.

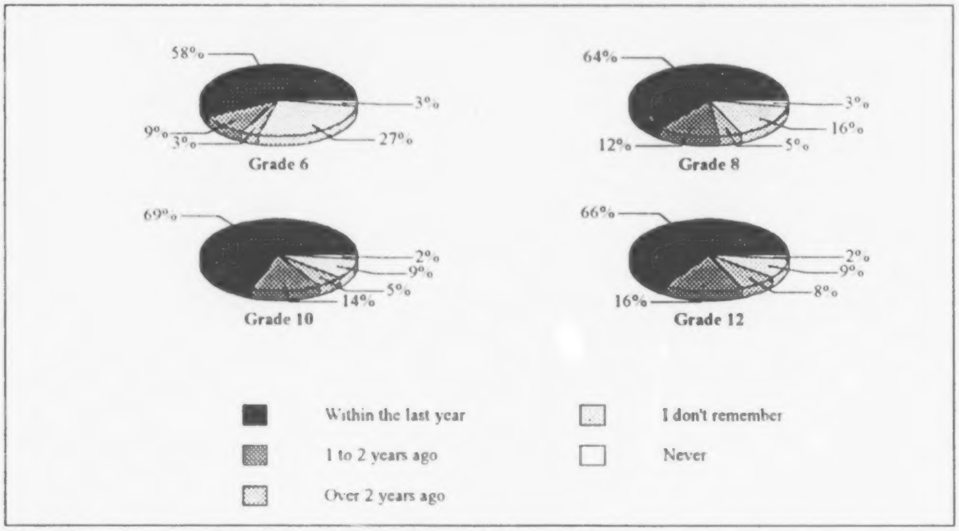

Figure 32. Most recent visit to a doctor, by grade (Item 85).

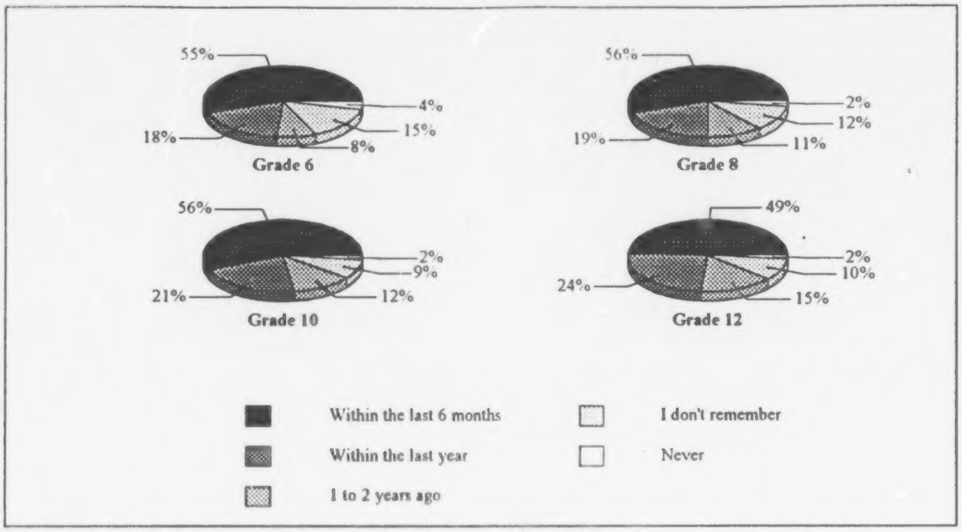

Figure 33. Most recent visit to a dentist, by grade (Item 86).

Safety

Finding: *During the past thirty days, one out of five students at the sixth grade had been in a vehicle driven by someone who had been drinking. At twelfth grade, one out of three students had been in a vehicle driven by someone who had been drinking.*

Finding: *During the past thirty days, one out of ten tenth grade students, and one out of five twelfth grade students, had driven a vehicle while or after drinking alcohol or using drugs.*

Injuries are a leading cause of death for adolescents, and as many as half the deaths due to injury are motor vehicle related. Motor vehicle caused injuries are also a leading contributor of adolescent admissions to hospitals and emergency rooms (Malek, et al., 1991). Alcohol-related traffic crashes cause serious injury and disability and rank as the leading cause of spinal cord injury among adolescents and young adults. (National Highway Traffic Safety Administration, 1987).

The results of this survey are therefore a cause for concern. Beginning at sixth grade, 19 percent of the students reported that during the past month they had been in a car, truck or motorcycle being driven by some one who had been drinking alcohol or using drugs. This percentage increases as students get older, so that at twelfth grade 35 percent reported that they had been in this situation. At all four grade levels surveyed, about 5 percent reported that they had been in this situation six or more times.

Of even greater cause for concern are the findings about students' own driving after using alcohol or other drugs (Figure 33). Beginning at eighth grade, 10 percent of the students reported that during the past month they themselves had driven a car, truck or motorcycle while or after drinking alcohol or using drugs (this finding is also of interest since eighth grade is below the legal driving age). By twelfth grade 21 percent reported that they had engaged in this behavior.

Healthy People 2000 Objectives related to this topic area include:

- Reduce deaths among youth age 15-24 by motor vehicle crashes to no more than 33 per 100,000 people.
- Reduce deaths among people age 15-24 caused by alcohol-related motor vehicle crashes to no more than 18 per 100,000.

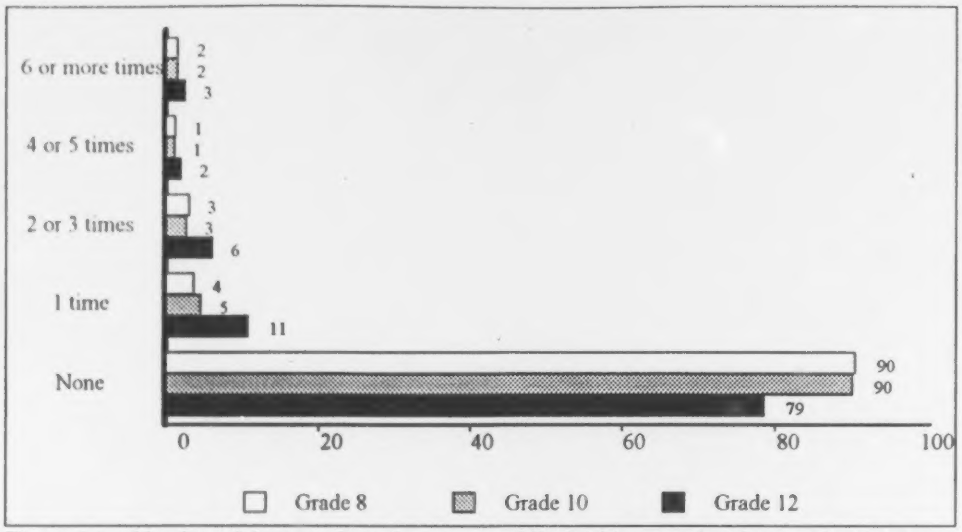

Figure 34. Number of times students drove a car while drinking or using drugs in last 30 days (Item 88).

Finding: As many as one-fourth of the students have carried a weapon during the past month. This is the same percentage that has ever carried a weapon to school.

School safety is increasingly becoming an area of concern for parents, students, teachers and administrators. This concern for school safety was nowhere made more clear than in its inclusion in the *National Educational Goals* for the Year 2000. Goal 6 includes both AOD use and school safety: "By the year 2000, every school in America will be free of drugs and violence and will offer a disciplined environment conducive to learning." Nonfatal violence often precedes fatal violence among youth, and homicide is the second leading cause of death among adolescents. During the 1980s, an average of 1,000 people per year were killed by adolescent youth using firearms, cutting instruments, or blunt objects. Of those deaths, two-thirds were caused by firearms. Immediate access to potentially lethal weapons, especially firearms, increase the likelihood of death during a violent episode (Cook, 1991).

There is clearly a need to continue working toward safer schools in Washington state. Figure 35 shows that at the sixth grade, 17 percent of the students indicated that they had carried a weapon for self-protection or because they thought they might need it in a fight. This percentage jumped to 24 percent at eighth grade, and then declined only slightly at tenth and twelfth grade. That this is of concern to schools is reflected in that it is nearly the same percentage of students who indicated that they had at some time carried a weapon to school. As Figure 36 shows, 15 percent of students at sixth grade, and about 24 percent at the higher grades have carried a weapon to school.

Whether or not weapons were involved, during the past year many students had been in fights which resulted in injuries that had to be treated by a doctor or a nurse. As many as 16 percent at the sixth grade reported fighting that had this consequence (Figure 37). While this was also true at tenth grade, at eighth grade it was somewhat more common (19 percent), and at twelfth grade somewhat less common (13 percent). While most of the students who had been in a fight had done so with a friend or some one they knew, older students were increasingly likely to have been in a fight with strangers.

Healthy People 2000 Objectives related to this topic area include:

- Reduce by 20 percent the incidence of weapon carrying by adolescents age 14-17.
- Reduce by 20 percent the incidence of physical fighting among adolescents age 14-17.

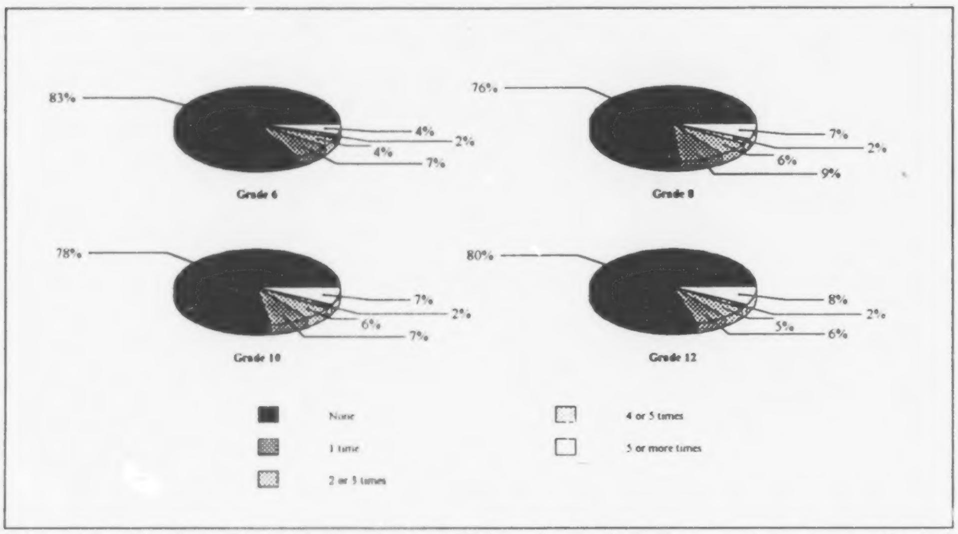

Figure 35. Number of times during the past 30 days that students have carried a weapon for self-protection or because they thought they might need it in a fight (Item 93).

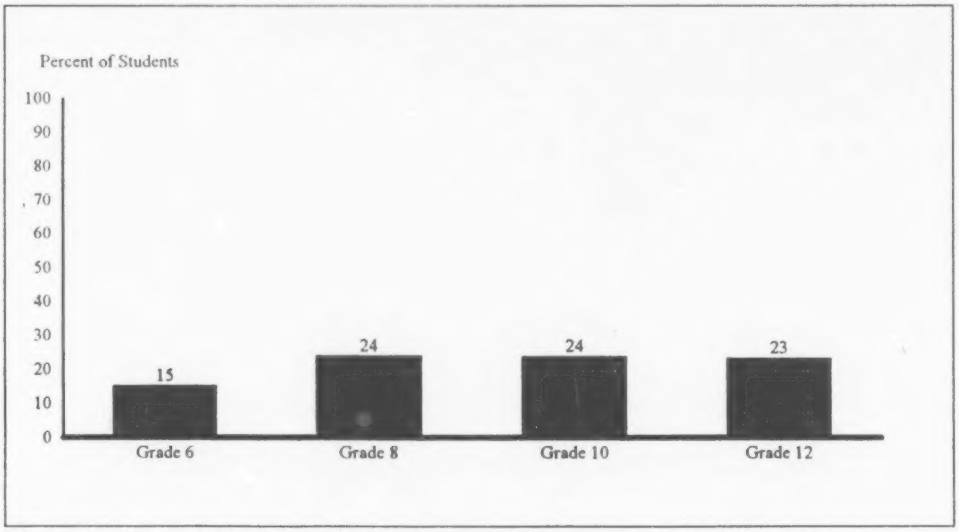

Figure 36. Percent of students who have ever carried a weapon to school (Item 94).

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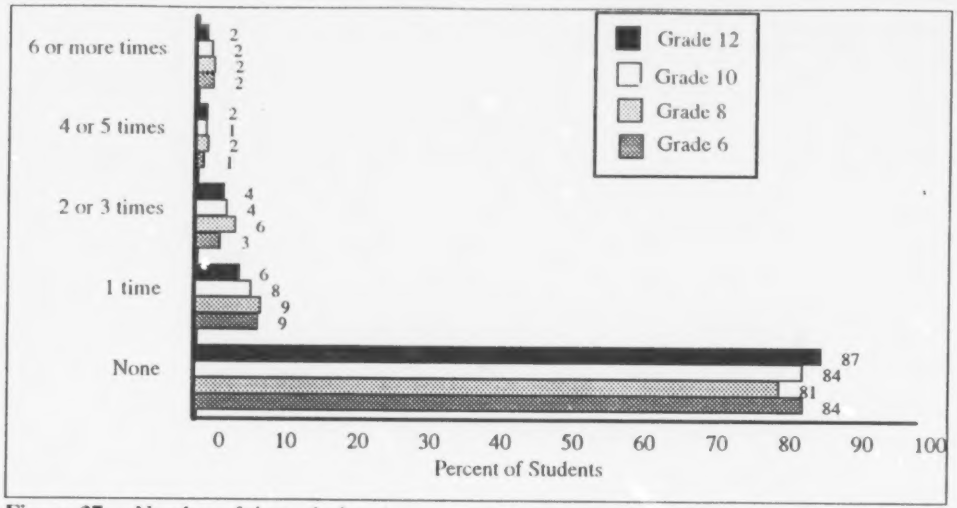

Figure 37. Number of times during the past year that students have been in a fight resulting in injuries (Item 96).

Diet and Weight

Finding: As many as 39 percent of the students surveyed reported that they think of themselves as either too thin or too fat.

Youth who are overweight and remain so as adults are at risk for a variety of chronic illnesses in adulthood: high blood pressure, elevated cholesterol levels, coronary heart disease, diabetes, and decreased life expectancy (Gans, 1990). Additionally, overemphasis on body-weight during adolescence may contribute to potentially harmful weight-management practices and eating disorders (Shisslak, et al., 1990). The American Medical Association has recently reported that 5 to 25 percent of American adolescents were "overweight" (i.e., were up to 20 percent over the maximum recommended weight for their height), and 5 percent were "obese" (i.e., greater than 20 percent over the maximum recommended weight for their height) (Gans, 1990).

Figure 38 shows that as early as sixth grade, students begin to think of themselves as either too thin (underweight) or too fat (overweight). At this grade only 72 percent of the students think of themselves as being about the right weight. This percentage declines to 63 percent at eighth grade, and remains at this point at grades ten and twelve. Only 45 percent of the sixth grade students, and only about one-third of the students at the higher grades, reported that they are not trying to do anything about their weight. The majority are either trying to lose weight, trying to keep from gaining more weight, or trying to gain more weight.

One of the contributing factors to adolescent weight problems is their eating habits. As one measure of good nutritional practice, students were asked how many servings of vegetables or fruit they had eaten the previous day (Figure 39). Most students reported that during the previous day they had eaten green or yellow vegetables or fruit. Although 83 percent at sixth grade had eaten fruit or vegetables the previous day, this percentage slowly decreases as students get older. At the twelfth grade, only 80 percent had eaten fruit or vegetables the previous day.

Healthy People 2000 Objectives related to this topic area include:

- Reduce overweight to a prevalence of no more than 15 percent among adolescents age 12-19.
- Increase to at least 50 percent the proportion of overweight people age 12 and older who have adopted sound dietary practices combined with regular physical activity.

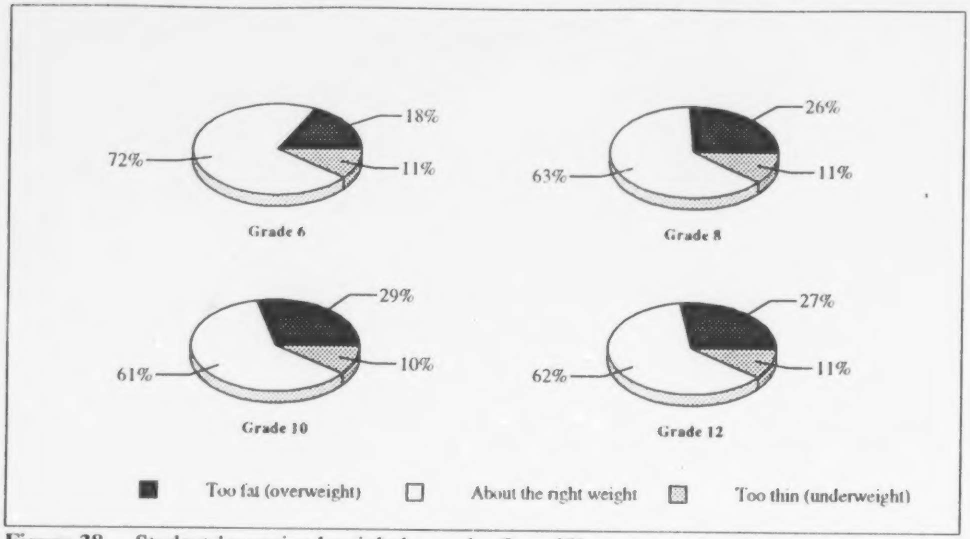

Figure 38. Students' perceived weight by grade (Item 98).

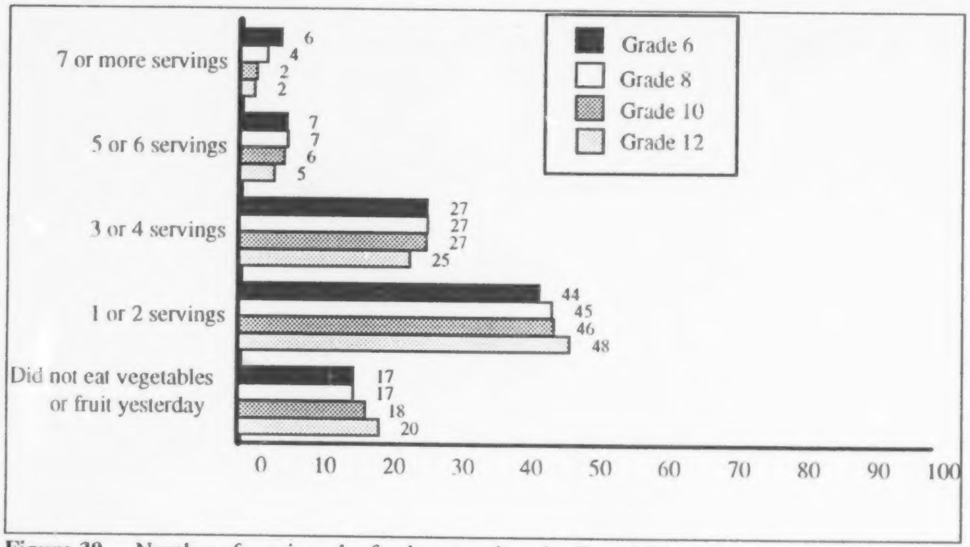

Figure 39. Number of servings, by food type and grade (Item 100).

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Physical Activity and Exercise

Finding: *As many as one-fourth of the students surveyed had not engaged in hard physical exercise during the past week.*

Finding: *During the past two weeks, as many as 30 percent of the students surveyed had spent three or more hours each school day watching television or videos, or playing computer games.*

As important as diet and nutrition, regular physical exercise plays a role in promoting health and well-being. In addition to reducing the risk of being overweight, it has been shown that regular physical activity may reduce the risk for certain health problems: high blood pressure, colon cancer, coronary heart disease, depression, diabetes, and overall death rates. Patterns of physical activity established during childhood/adolescence have a greater likelihood of continuing into adulthood (Powell, et al., 1993).

However, at grade six 14 percent of the students stated that they had not engaged in any hard physical exercise during the past week, and 23 percent at grade twelve had not. As seen by figure 40, less than half of all students surveyed reported participating in hard physical exercise four or more days in the past week.

On the other hand, Figure 41 demonstrates that almost all students had watched television or videos, or played computer games, before or after school during the past two weeks. Many students spend quite a bit of time with these activities. For example, at eighth grade 30 percent of the students indicated that they had spent three or more hours a day in this way. Twelfth grade students were less likely to spend this much time, with only 21 percent spending three or more hours a day.

Healthy People 2000 Objectives related to this topic area include:

- Increase to at least 50 percent the proportion of overweight people under age 12 and older who have adopted sound dietary practices combined with regular physical activity.
- Increase to at least 75 percent the proportion of children and adolescents age six-17 who engage in vigorous physical activity that promotes the development and maintenance of cardiorespiratory fitness three or more days per week for 20 minutes or more per occasion.
- Reduce to no more than 15 percent the proportion of people age six and older who engage in no leisure-time physical activity.
- Increase to at least 30 percent the proportion of people age six and older who regularly perform physical activities that enhance and maintain muscular strength, endurance and flexibility.
- Increase to at least 30 percent the proportion of people age six and older who engage regularly, preferably daily, in light to moderate physical activity for at least 30 minutes per day.

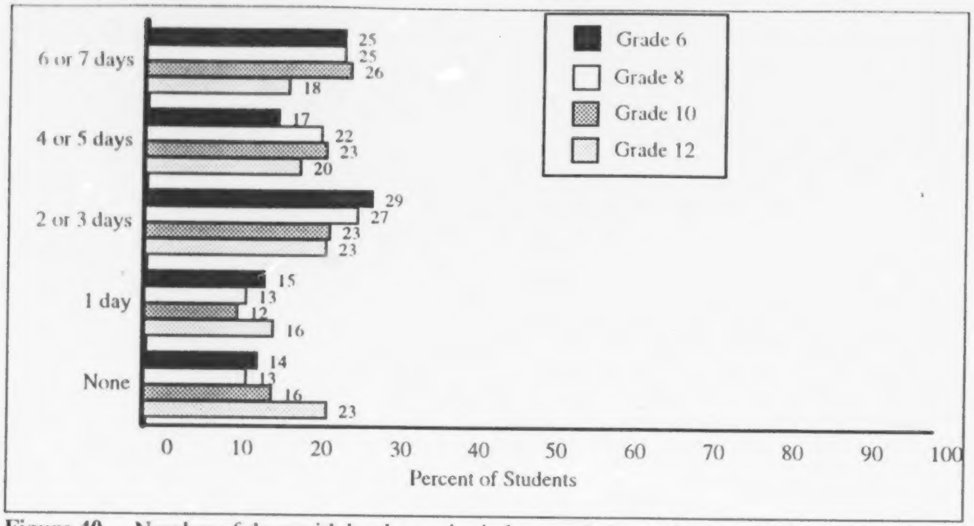

Figure 40. Number of days with hard exercise in last week, by grade (Item 101).

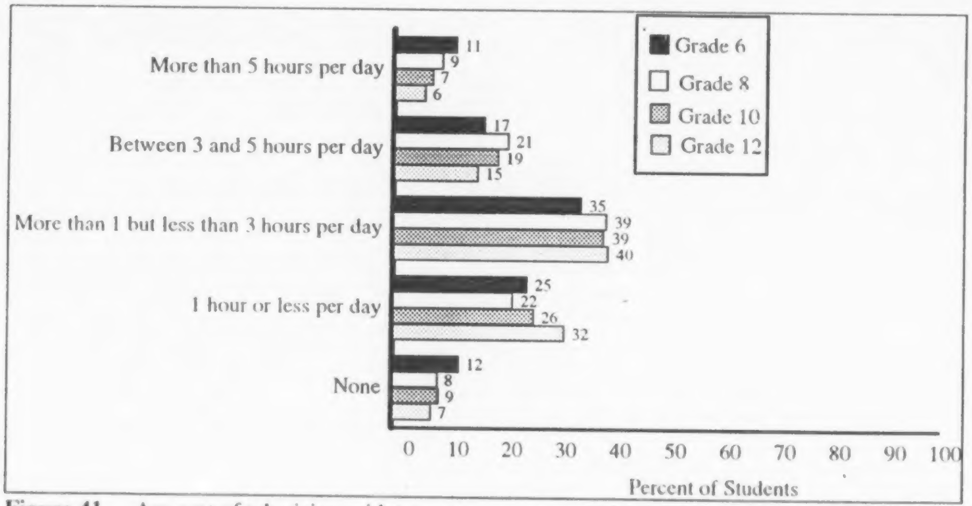

Figure 41. Amount of television, videos or computer games in past two weeks, by grade (Item 102).

AIDS/HIV Education

AIDS is the final, and fatal, phase of HIV disease. Although less than one-half of one percent of all AIDS cases are among the 13-19 year old age group, the number of diagnosed cases is doubling each year. AIDS has become the sixth leading cause of death among the 15-24 year old age group. Twenty percent of AIDS cases are among the 20-29 year-old age group; significant because it takes an average of 10 years for HIV disease to progress to AIDS, meaning that many of these young adults acquired HIV as adolescents. Furthermore, almost two-thirds of adolescents with AIDS contracted it through sexual contact with adults (Gans, 1990; U.S. Department of Health and Human Services, 1991).

Risk factors that contribute to the increase of adolescent HIV cases include: unsafe sexual practices (multiple partners, sexually active, no or inconsistent/incorrect use of condoms), alcohol and other mind-altering drug use (increases likelihood of unsafe sexual activity, intravenous drug use), and inadequate information and knowledge about HIV/AIDS. There are significant differences in adult versus adolescent risk behaviors in acquiring HIV disease. Adults primarily acquire it from homosexual and/or bisexual contact, whereas adolescents primarily acquire it through heterosexual contact. Finally, adolescents who are at highest risk of contracting HIV disease include ethnic minority, homosexual, bisexual, female, runaway, homeless, delinquent, incarcerated and sexually abused youth. (U.S. Department of Education, 1987; U.S. Department of Health and Human Services, 1991).

> *Finding:* *As with alcohol and other drug education, most students think that education about sexually transmitted diseases should begin in elementary school.*

As many as half of the students who reported having had sex indicated that the last time they had intercourse they did not use a condom to prevent sexually transmitted diseases. Given the fatal nature of some of these diseases, this is clearly cause for concern. Thus, it may be well to heed the perception of the majority of students (69 percent at sixth grade) who believe that education about sexually transmitted diseases should begin at fifth grade or earlier.

Healthy People 2000 Objectives related to this topic area include:

- Confine the prevalence of HIV infection to no more than 800 per 100,000.

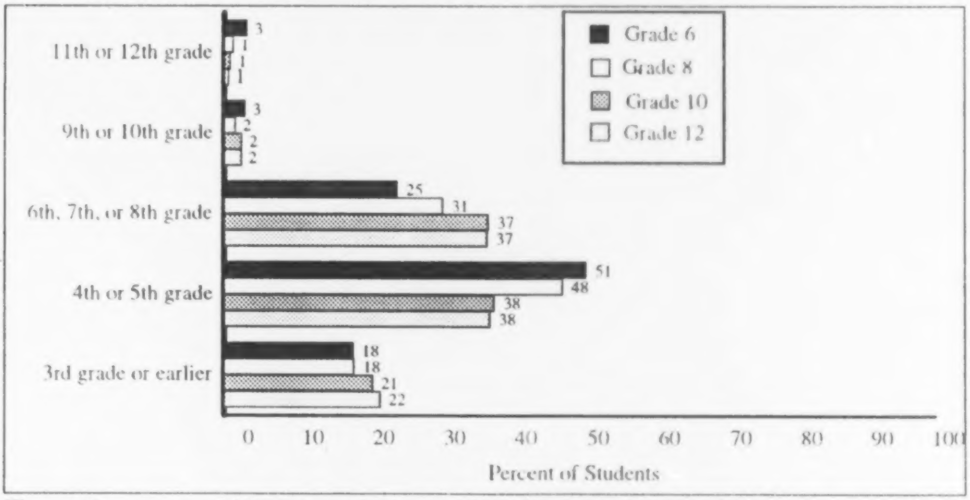

Figure 42. Age at which students think education about sexually transmitted diseases should begin, by grade (Item 102).

Sexual Behavior

Finding: Students in Washington state are sexually active.

Almost one-fourth of the eighth grade students responding to this survey reported that they had had sexual intercourse at some time in their life (Figure 43). This percentage increases quickly as students get older, so that 42 percent at tenth grade and 60 percent at twelfth grade reported having had this experience. Of those students who have had sexual intercourse, almost all had this experience by they time they were sixteen years old. At eighth grade, however, almost half of the sexually active students had intercourse for the first time at the age of twelve or younger. It is also important to note that of those students who are sexually active, many do not use any method of preventing pregnancy (Figure 44).

Finding: By the time they reached twelfth grade, nearly one out of five students who answered the survey had been sexually abused.

As seen in Figures 45 and 46, physical and sexual abuse is far too common an experience among students in Washington state. By twelfth grade, 19 percent of the students surveyed reported that they had been physically abused or mistreated by an adult. Similarly, 18 percent reported having been sexually abused (defined as when "someone in your family or someone else touches you in a sexual way in a place you did not want to be touched, or does something to you sexually which they shouldn't have done").

Healthy People 2000 Objectives related to this topic area include:

- Reduce the proportion of adolescents who have engaged in sexual intercourse to no more than 15 percent by age 15 and no more and no more than 40 percent by age 17.
- Increase to at least 40 percent the proportion of sexually active adolescents age 17 and younger who have abstained form sexual activity for the previous three months.
- Reduce pregnancies among girls age 17 and younger to no more than 5 percent.
- Increase to at least 90 percent the proportion of sexually active, unmarried people/persons age 19 and younger who use contraception, especially combined method contraception that effectively prevents pregnancy and provides barrier protection.

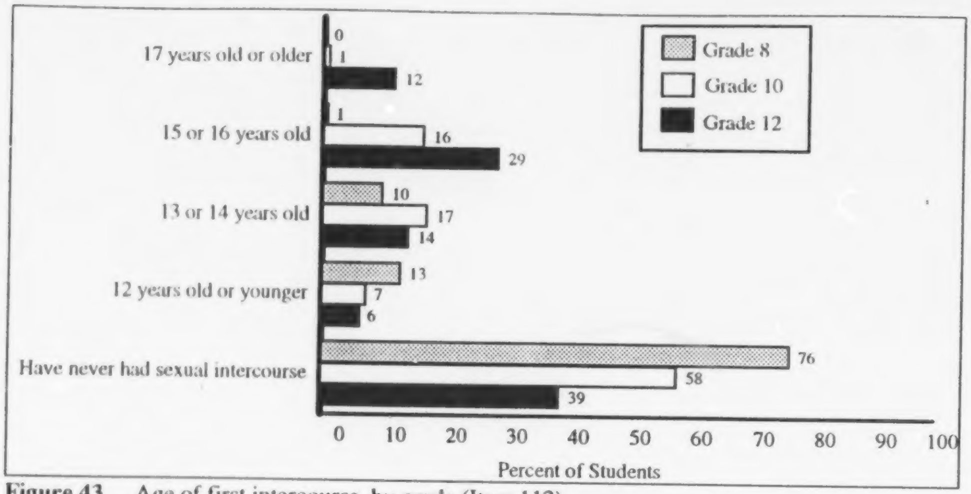

Figure 43. Age of first intercourse, by grade (Item 112).

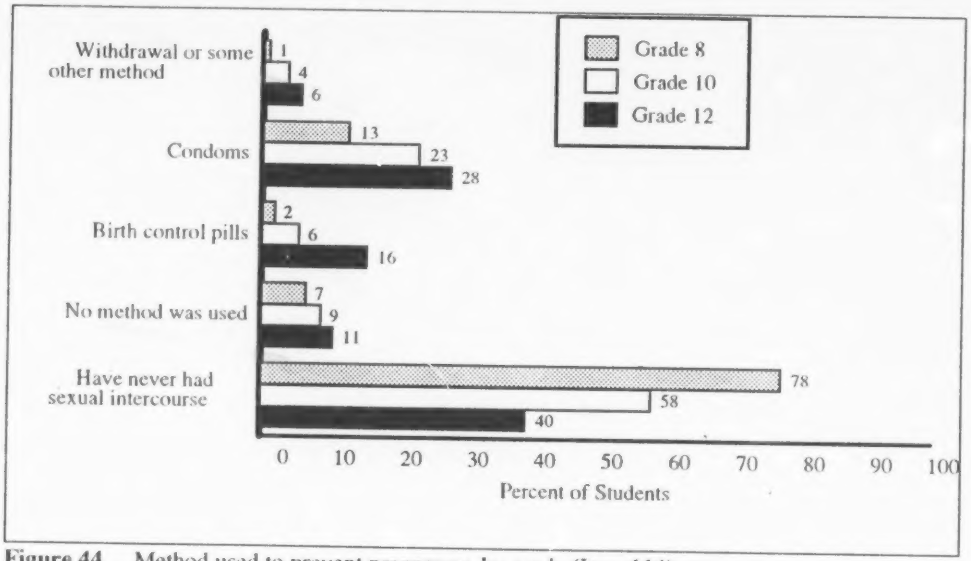

Figure 44. Method used to prevent pregnancy, by grade (Item 114).

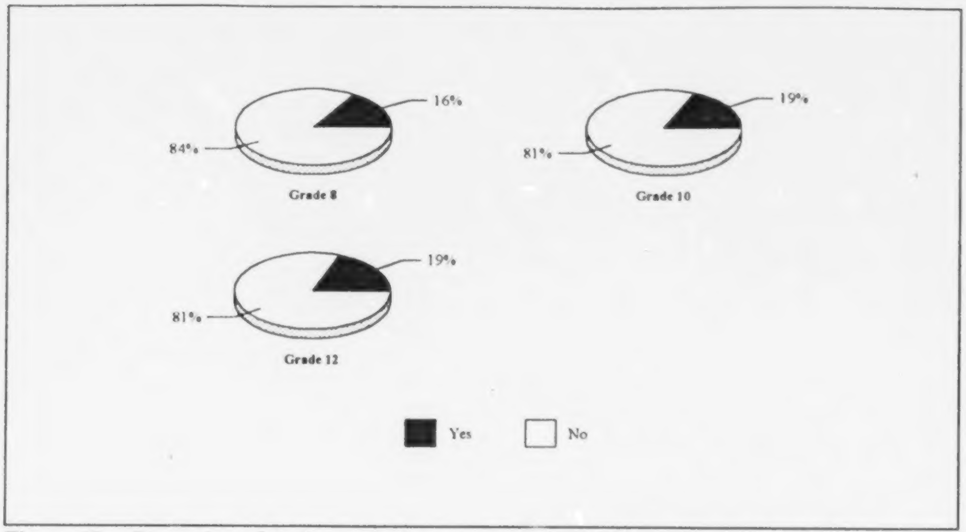

Figure 45. Proportion of students who have been physically abused by an adult, by grade (Item 108).

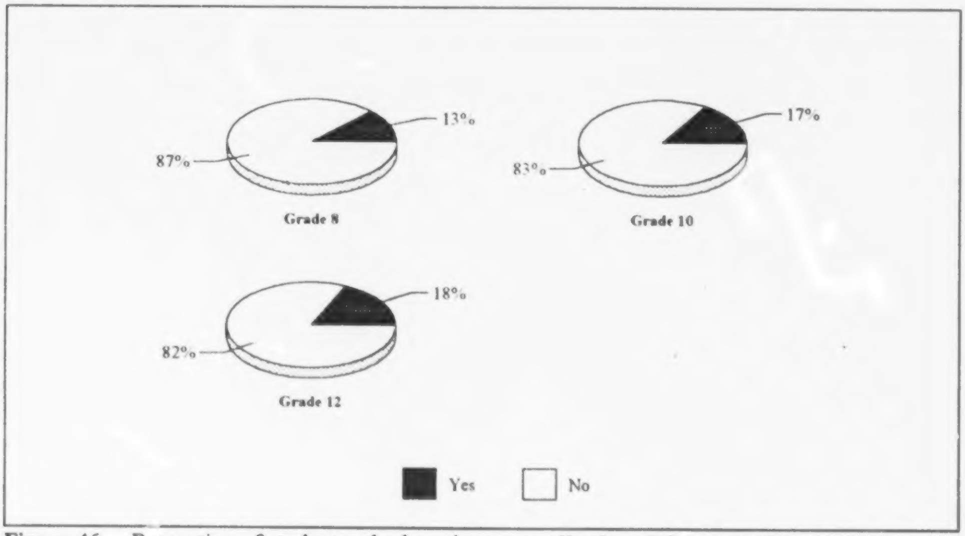

Figure 46. Proportion of students who have been sexually abused, by grade (Item 109).

Suicide

Finding: *More than one out of ten students surveyed had attempted suicide during the previous year.*

Attempted suicide is a potentially lethal health event, a risk factor for future completed suicide, and a potential indicator of other health problems such as substance abuse, depression, or adjustment and stress reactions. (ADAMHA, 1989) Suicide rates are the most rapidly increasing cause of death among adolescents, having quadrupled over the last forty years (from 2.7 to 11.3 per 100,000). It is estimated that 10-25% of all adolescent deaths are the result of suicide (Hicks, 1990). Factors that are found to contribute to the likelihood of suicide attempts include: depression; loss of support system (family, romantic relationships, friends, acquaintances, etc.); loss of family status (social or financial); alcohol and/or other drug use; and, loss of relationships (loved one, close friend, family, etc.) (Jones, 1987).

Among those Washington students surveyed, during the past year one-fifth of the students at grades eight [illegible] twelve had seriously thought about committing suicide (Figure 47). Even more students at tenth grade (24 percent) had seriously thought of taking their own life. Of even greater concern are the percentages of students who actually made a suicide attempt: 10 percent at grades eight and twelve, and 13 percent at grade ten (Figure 48). About one-third of these suicide attempts resulted in an injury, poisoning or overdose that had to be treated by a doctor or a nurse.

Healthy People 2000 Objectives related to this topic area include:

- Reduce by 15 percent the incidence of injurious suicide among adolescents age 14-19.

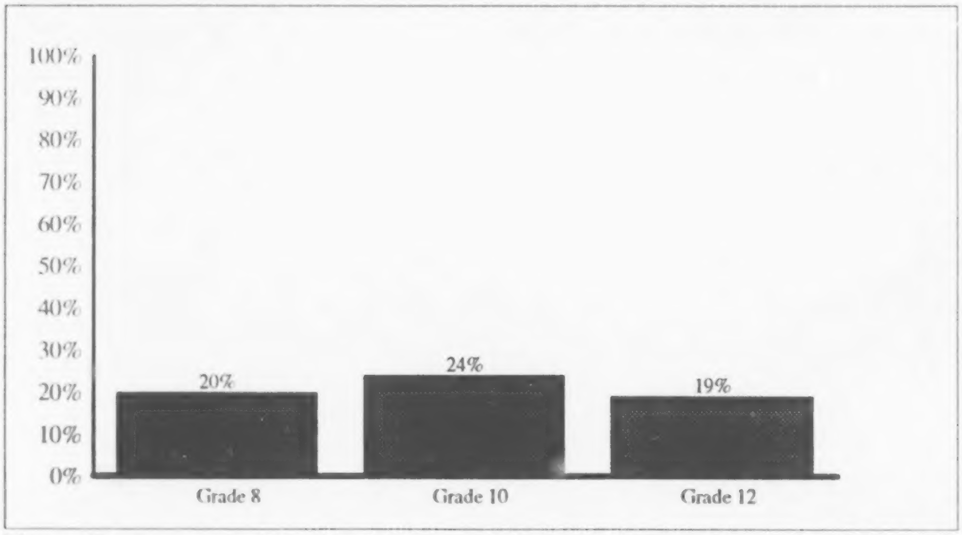

Figure 47. Percent who have thought about committing suicide in past year, by grade (Item 117).

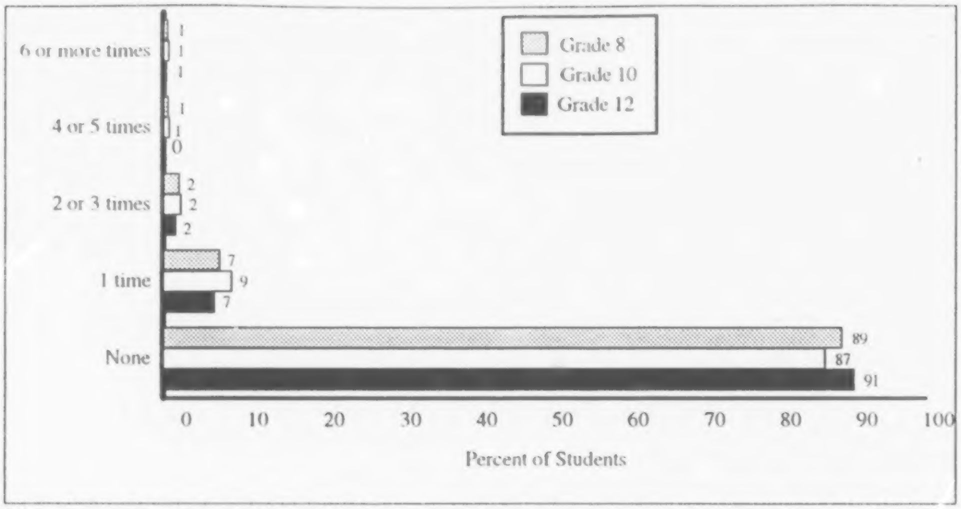

Figure 48. Number of times students attempted suicide in past year, by grade (Item 119).

Conclusion

The 1992 administration of the Washington State Survey of Adolescent Health Behaviors was the product of a collaborative effort among the Office of the Superintendent of Public Instruction, the Department of Health, and the Northwest Regional Educational Laboratory. The survey expands on the work of two previous administrations of a student tobacco, alcohol and other drug survey sponsored by OSPI. That survey asked about lifetime prevalence of use, regular use, substance abuse, patterns of use, factors related to use, experience with alcohol and drug education, and perceived effects of media advertising. The present survey includes additional items drawn from CDC's Youth Risk Behavior Survey which include questions about, medical care, safety, diet and weight, physical activity and exercise, HIV/AIDS education, sexual behavior, and suicide. By expanding the scope of the survey it was possible to gather information necessary for planning a comprehensive set of prevention programs.

The results of this survey confirm that, while progress has been made since 1988 and 1990, a serious problem still exists with substance use and abuse among public school students in Washington. This problem is not confined to the urban centers nor to minority students nor to high school students nor to any other specific group.

There is indication that actual use of alcohol is going down for eighth, tenth and twelfth grade students. In contrast, use of alcohol has not declined for sixth grade students. While there are some specific exceptions, in general the use of drugs has not decreased. These findings indicate that after an initial decline, from 1988 to 1990, there has been a leveling off in 1992. Important to note, there has been continued increase over the last four years in use of both smoking and chewing tobacco by tenth grade students.

Students themselves continue to agree that alcohol and drug education must start early. Many feel it should begin at the third grade level or earlier. While young students perceive that prevention programs are benefiting students, older students are less likely to think that anything is (or even can) reduce student AOD use.

The present survey asked for the first time questions about a variety of adolescent health behaviors. The results indicate a need for statewide efforts to address a variety of student needs. For example, it is indeed cause for concern that: during the thirty days prior to the survey, one out of five twelfth graders had driven a vehicle while or after drinking alcohol or using drugs; one-fourth of the students in eighth, tenth and twelfth grades has on at least on occasion carried a weapon to school; one-fourth of the twelfth grade students had not engaged in hard physical exercise in the week prior to the survey; nearly one out of five seniors surveyed indicated that they had been sexually abused; and one out of ten eighth, tenth and twelfth grade students had attempted suicide at least once during the past year.

The current study provides information for planning prevention and intervention programs in Washington. The baseline and two points of comparison have now been established for AOD-related questions, and the baseline has now been established for health behavior questions. In the coming years, periodic assessments of adolescent health behaviors will help local and state agencies continue to evaluate the effects and sharpen the focus of the continuing statewide prevention effort.

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Appendix A

Statewide Results by Grade

Washington State Survey of Adolescent Health Behaviors Summary Report

The purpose of this survey was to determine the level of health risk behaviors by students in the state of Washington. The survey was administered anonymously to the students in December of 1992 through February of 1993. Participation was voluntary.

First note the three scales below. Students are rated on overall use based on their answers to several items.

Drug Use: Levels are based on the frequency of drug use, the type of drug consumed, and the number of drugs consumed. High use includes daily use of marijuana or weekly use of cocaine.

	Grade 6 N=4765	Grade 8 N=4901	Grade 10 N=3427	Grade 12 N=2327
No use	90.6%	77.0%	67.5%	61.3%
Low use	6.7%	13.9%	16.9%	17.3%
Moderate use	1.8%	5.8%	10.3%	14.4%
High use	0.9%	3.2%	5.3%	7.0%

Alcohol Use: Levels are based on the frequency of drinking and the amount typically consumed. High use implies daily drinking or regular binge drinking (5 or more drinks at one time).

	Grade 6 N=4734	Grade 8 N=4736	Grade 10 N=3174	Grade 12 N=2078
No use	67.0%	44.7%	29.7%	20.2%
Low use	31.6%	46.1%	40.6%	34.1%
Moderate use	0.8%	4.6%	14.5%	20.8%
High use	0.7%	4.7%	15.2%	24.9%

Health Risk: Levels are based on the degree to which a student reports experiences or characteristics that predict adolescent health risks.

	Grade 6 N=4779	Grade 8 N=4924	Grade 10 N=3430	Grade 12 N=2329
Low risk	78.7%	64.8%	54.3%	44.6%
Moderate risk	18.2%	29.5%	39.2%	48.2%
High risk	3.2%	5.8%	6.6%	7.2%

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2. Which of the following best describes your background? Choose only one answer. (For example, if one parent was part Asian and part White and the other parent was White, you would mark E.)

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4417	N=4769	N=3372	N=2299
a. Asian or Pacific Islander	5.8%	6.5%	5.4%	5.2%
b. Black, not Hispanic	5.1%	4.5%	2.0%	1.7%
c. Hispanic	7.3%	6.2%	4.2%	3.6%
d. American Indian	10.2%	7.3%	5.5%	3.3%
e. White, not Hispanic	71.6%	75.5%	82.8%	86.3%

4. How much school do you miss?

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4749	N=4900	N=3423	N=2324
a. I never miss school.	11.2%	8.6%	8.5%	5.9%
b. I hardly ever miss school.	49.5%	40.9%	34.9%	25.6%
c. I miss 2 or 3 days a semester.	29.4%	34.8%	34.0%	35.0%
d. I miss some school every month.	8.7%	13.9%	19.5%	27.7%
e. I miss some school every week.	1.2%	1.8%	3.1%	5.7%

5. In general, what are your grades right now? Mostly...

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4668	N=4883	N=3409	N=2311
a. As	35.2%	35.0%	31.4%	32.6%
b. Bs	44.1%	41.2%	40.3%	44.3%
c. Cs	16.3%	18.4%	22.1%	19.0%
d. less than Cs	4.3%	5.4%	6.2%	4.1%

6. How important is it to you to get good grades?

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4759	N=4909	N=3423	N=2327
a. It is very important to me.	71.5%	57.9%	58.4%	47.4%
b. It is somewhat important.	22.1%	32.3%	32.0%	39.2%
c. I care about it, but it is not very important.	5.3%	8.2%	8.2%	11.8%
d. I don't care about it.	1.1%	1.7%	1.4%	1.6%

7. How likely is it that you will graduate from college (four-year program)?

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4670	N=4829	N=3374	N=2289
a. Definitely won't	2.3%	2.7%	3.4%	5.7%
b. Probably won't	6.0%	7.4%	12.3%	14.5%
c. Probably will	51.8%	45.1%	40.3%	33.9%
d. Definitely will	40.0%	44.9%	44.0%	45.9%

8. During the school year, how many hours a week do you work at a part-time job?

	Grade 6	Grade 8	Grade 10	Grade 12
	*	N=4864	N=3420	N=2322
a. I don't work	*	72.1%	67.2%	35.9%
b. 1 to 4 hrs.	*	15.0%	8.6%	5.9%
c. 5 to 9 hrs.	*	7.4%	7.4%	9.7%
d. 10 to 20 hrs.	*	3.2%	12.2%	29.7%
e. over 20 hrs.	*	2.2%	4.6%	18.8%

9. How many extra school activities do you participate in regularly (for example: sports, music, student government, clubs)?

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4736	N=4910	N=3424	N=2324
a. None	29.9%	27.0%	27.4%	29.8%
b. 1	29.0%	29.0%	27.8%	25.8%
c. 2	20.4%	22.2%	22.9%	20.5%
d. 3	10.6%	12.7%	13.2%	11.5%
e. 4 or more	10.1%	9.0%	8.8%	12.3%

10. How many non-school activities do you participate in regularly (for example: Little League, Scouts, church youth)?

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4736	N=4908	N=3425	N=2325
a. None	30.1%	34.4%	36.8%	38.4%
b. 1	29.0%	31.3%	33.2%	31.1%
c. 2	20.2%	17.6%	17.8%	18.2%
d. 3	10.4%	8.7%	6.3%	6.6%
e. 4 or more	10.3%	8.0%	5.9%	5.7%

11. How many different school sports teams have you participated on in the last two school years (for example: football, soccer, volleyball, basketball, track, swim team)?

	Grade 6	Grade 8	Grade 10	Grade 12
	*	N=4875	N=3425	N=2326
a. None	*	31.4%	32.8%	40.0%
b. 1	*	23.4%	23.8%	23.8%
c. 2	*	17.1%	19.3%	19.5%
d. 3	*	12.8%	13.0%	9.2%
e. 4 or more	*	15.3%	11.2%	7.6%

12. In the last year have you ever thought about dropping out of school?

	Grade 6	Grade 8	Grade 10	Grade 12
	*	N=4861	N=3421	N=2324
a. Never thought about it	*	78.5%	69.9%	68.2%
b. Thought about it, but not seriously	*	18.3%	24.9%	25.3%
c. Seriously thought about it	*	3.2%	5.3%	6.5%

13. How many times have you changed schools in the last 12 months?

	Grade 6 N=4726	Grade 8 N=4906	Grade 10 N=3422	Grade 12 N=2328
a. None (same school for a year)	71.7%	83.0%	81.4%	88.6%
b. 1 time (attended two schools)	20.7%	12.7%	14.3%	8.9%
c. 2 times	4.2%	2.5%	2.8%	1.5%
d. 3 or more times	3.5%	1.8%	1.5%	0.9%

14. When you are away from home, do your parents know where you are and who you are with?

	Grade 6 *	Grade 8 N=4876	Grade 10 N=3421	Grade 12 N=2325
a. Every time	*	35.2%	27.0%	17.9%
b. Most times	*	43.5%	50.5%	50.8%
c. Sometimes	*	15.4%	16.6%	22.1%
d. Rarely	*	4.6%	4.8%	7.0%
e. Never	*	1.3%	1.3%	2.2%

The following questions ask about problems with alcohol (beer, wine, or liquor) or other drugs.

15. Do you think there is an alcohol or other drug problem among kids attending your school?

	Grade 6 N=4613	Grade 8 N=4851	Grade 10 N=3407	Grade 12 N=2316
a. Yes, a lot of kids are using alcohol or	4.6%	15.6%	49.8%	55.8%
b. Yes, some kids are using alcohol or other	15.2%	39.7%	39.3%	35.4%
c. No, only a few kids are using alcohol or	35.9%	37.1%	9.7%	7.9%
d. No, no one uses alcohol or other drugs.	44.3%	7.6%	1.3%	0.9%

16. Do you think there is alcohol or other drug use during the school day at your school?

	Grade 6 N=4582	Grade 8 N=4732	Grade 10 N=3344	Grade 12 N=2274
a. Yes, alcohol	4.1%	8.1%	7.9%	7.6%
b. Yes, drugs	7.0%	12.2%	17.6%	16.2%
c. Yes, both	9.1%	22.5%	52.4%	55.5%
d. No	79.9%	57.2%	22.1%	20.8%

17. Do you think teachers in your school are concerned about alcohol or other drug problems among kids attending your school?

	Grade 6 N=4596	Grade 8 N=4849	Grade 10 N=3388	Grade 12 N=2299
a. Yes, they are very concerned and are trying to do something about it.	57.6%	37.5%	23.1%	24.0%
b. They are concerned, but are not trying to do much about it.	19.1%	32.9%	49.7%	50.9%
c. They do not seem to be too concerned.	11.9%	20.9%	21.7%	21.2%
d. No, they are not concerned about it at all.	11.4%	8.7%	5.5%	3.8%

18. Is there drinking or drug use among kids at most parties you attend?

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4697	N=4871	N=3401	N=2322
a. Yes, alcohol	5.7%	16.7%	26.1%	27.2%
b. Yes, drugs	1.3%	0.9%	0.7%	0.4%
c. Yes, both alcohol and other drugs	4.4%	13.6%	32.0%	43.7%
d. No	66.4%	45.9%	17.7%	9.2%
e. I don't attend parties	22.1%	23.0%	23.6%	19.4%

19. Have you ever gotten into trouble at home or at school because of your drinking or drug use?

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4731	N=4876	N=3416	N=2318
a. I don't drink or use drugs	75.1%	68.6%	49.5%	36.7%
b. No, never	19.7%	21.6%	33.8%	39.8%
c. Once or twice	3.4%	8.0%	14.5%	20.7%
d. Many times	1.8%	1.9%	2.3%	2.8%

20. Have you ever been arrested because of drinking or using drugs?

	Grade 6	Grade 8	Grade 10	Grade 12
	*	N=4847	N=3415	N=2322
a. I don't drink or use drugs	*	67.0%	48.3%	36.0%
b. No, never	*	29.5%	47.6%	58.7%
c. Once or twice	*	2.0%	2.9%	4.0%
d. Many times	*	1.5%	1.1%	1.2%

21. Are you aware of someone close to you (those you live with or a friend) who has a drinking or drug problem?

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4580	N=4799	N=3368	N=2296
a. Yes, someone I live with	13.0%	11.7%	8.4%	7.7%
b. Yes, a friend	16.3%	32.5%	45.8%	51.0%
c. Yes, both someone I live with and a friend	4.4%	8.2%	10.2%	10.5%
d. No, no one	66.4%	47.7%	35.5%	30.8%

How difficult do you think it would be for you to get each of the following types of drugs?

22. Marijuana or hashish (grass, hash, pot)

	Grade 6	Grade 8	Grade 10	Grade 12
	*	N=4798	N=3390	N=2312
a. Probably impossible	*	23.4%	6.5%	4.5%
b. Very difficult	*	16.0%	6.3%	3.5%
c. Fairly difficult	*	19.2%	14.0%	9.0%
d. Fairly easy	*	25.2%	36.2%	36.6%
e. Very easy	*	16.1%	37.0%	46.5%

23. Cocaine (coke, crack, snow)

	Grade 6	Grade 8	Grade 10	Grade 12
	*	N=4778	N=3385	N=2302
a. Probably impossible	*	32.3%	14.7%	10.4%
b. Very difficult	*	22.2%	18.1%	16.5%
c. Fairly difficult	*	21.0%	28.4%	31.2%
d. Fairly easy	*	17.7%	28.7%	31.4%
e. Very easy	*	6.8%	10.1%	10.6%

For questions 24 to 37, students marked how often they used each type of drug by selecting one of the following answers for each question:

Never	Never used in my lifetime
Some	Used at least once in my lifetime
Monthl	Used about once a month (or at least 6 times) in the last 12 months
Weekl	Used about once a week (or at least 3 times) in the last 30 days
Daily	Used about every day (or at least 5 times a week) in the last 30 days

24. Smoking tobacco (cigarettes, cigars, pipes)

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4762	N=4896	N=3423	N=2325
a. Never	88.3%	69.0%	56.3%	47.4%
b. Some	9.5%	20.0%	23.9%	26.5%
c. Monthly	0.9%	3.9%	5.6%	5.8%
d. Weekly	0.6%	2.9%	3.4%	4.8%
e. Daily	0.7%	4.2%	10.8%	15.5%

25. Smokeless tobacco (chew, plug, snuff)

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4759	N=4900	N=3420	N=2327
a. Never	94.5%	86.9%	76.8%	72.1%
b. Some	4.4%	9.4%	13.9%	17.1%
c. Monthly	0.4%	1.4%	2.6%	2.3%
d. Weekly	0.3%	1.2%	2.4%	2.6%
e. Daily	0.3%	1.0%	4.3%	5.9%

26. Beer

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4749	N=4896	N=3421	N=2326
a. Never	77.6%	56.7%	38.2%	26.7%
b. Some	20.9%	33.1%	38.6%	36.3%
c. Monthly	0.8%	6.2%	13.8%	20.0%
d. Weekly	0.7%	2.9%	8.4%	15.8%
e. Daily	0.1%	1.0%	1.0%	1.1%

27. Wine coolers

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4752	N=4894	N=3418	N=2327
a. Never	78.9%	56.8%	42.2%	31.7%
b. Some	19.5%	34.4%	40.3%	45.0%
c. Monthly	1.0%	5.8%	12.8%	17.5%
d. Weekly	0.4%	2.4%	4.2%	5.4%
e. Daily	0.2%	0.6%	0.5%	0.4%

28. Wine (other than wine coolers)

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4759	N=4890	N=3420	N=2326
a. Never	82.4%	61.8%	48.3%	39.4%
b. Some	16.8%	32.0%	41.5%	47.5%
c. Monthly	0.7%	4.0%	7.3%	10.3%
d. Weekly	0.1%	1.7%	2.5%	2.5%
e. Daily	0.1%	0.3%	0.4%	0.3%

29. Hard liquor (whiskey, gin, vodka, mixed drinks)

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4747	N=4898	N=3416	N=2327
a. Never	90.7%	71.3%	47.9%	34.9%
b. Some	8.3%	21.0%	34.7%	39.8%
c. Monthly	0.6%	4.7%	12.2%	18.1%
d. Weekly	0.3%	2.2%	4.4%	6.7%
e. Daily	0.1%	0.7%	0.7%	0.5%

30. Marijuana or hashish (grass, hash, pot)

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4755	N=4896	N=3421	N=2325
a. Never	98.1%	90.3%	77.2%	67.1%
b. Some	1.5%	6.0%	13.0%	19.3%
c. Monthly	0.2%	1.9%	5.0%	6.6%
d. Weekly	0.2%	1.3%	3.4%	4.3%
e. Daily	0.1%	0.6%	1.4%	2.7%

31. Cocaine (snow, coke, crack)

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4754	N=4897	N=3426	N=2326
a. Never	98.9%	97.4%	96.5%	95.4%
b. Some	0.7%	1.6%	2.6%	3.6%
c. Monthly	0.2%	0.5%	0.3%	0.6%
d. Weekly	0.1%	0.4%	0.4%	0.3%
e. Daily	0.1%	0.2%	0.2%	0.1%

33. Hallucinogens (angel dust, LSD, acid, microdot, PCP, magic mushrooms)

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4741	N=4894	N=3419	N=2327
a. Never	98.8%	94.4%	88.9%	83.2%
b. Some	0.9%	4.0%	7.5%	11.9%
c. Monthly	0.1%	0.8%	2.2%	3.8%
d. Weekly	0.0%	0.5%	1.1%	1.0%
e. Daily	0.1%	0.3%	0.3%	0.1%

34. Inhaled substances to get high (glue, gasoline, paint thinner, spray cans, white-out, snappers, poppers, rush)

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4747	N=4891	N=3418	N=2325
a. Never	92.3%	82.6%	84.4%	86.9%
b. Some	6.5%	14.0%	13.1%	11.6%
c. Monthly	0.8%	1.9%	1.6%	1.0%
d. Weekly	0.3%	0.8%	0.7%	0.3%
e. Daily	0.2%	0.8%	0.2%	0.1%

35. Drugs purchased from the drugstore to get high (diet pills like Dexatrim, stay awake pills like NoDoz or Vivarin, pep pills, Nyquil or other cough medicines)

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4747	N=4894	N=3420	N=2326
a. Never	92.2%	88.9%	81.6%	77.7%
b. Some	6.5%	7.9%	13.7%	18.5%
c. Monthly	0.9%	2.1%	3.1%	2.8%
d. Weekly	0.3%	0.8%	1.0%	0.6%
e. Daily	0.1%	0.3%	0.6%	0.3%

36. Steroids (muscle builders)

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4758	N=4895	N=3420	N=2324
a. Never	98.9%	98.1%	97.8%	97.6%
b. Some	0.8%	1.0%	1.4%	1.7%
c. Monthly	0.0%	0.4%	0.4%	0.3%
d. Weekly	0.1%	0.3%	0.2%	0.2%
e. Daily	0.2%	0.2%	0.1%	0.2%

37. Other drugs (methamphetamines, tranquilizers, heroin, uppers, downers)

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4750	N=4895	N=3420	N=2326
a. Never	98.6%	95.2%	92.1%	90.5%
b. Some	1.0%	3.4%	6.0%	8.0%
c. Monthly	0.1%	0.7%	1.1%	1.2%
d. Weekly	0.1%	0.5%	0.4%	0.2%
e. Daily	0.2%	0.2%	0.3%	0.1%

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How often have you used each of the following drugs in the past 30 days:

38. Cigarettes

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4740	N=4882	N=3416	N=2317
a. None	97.2%	89.7%	82.9%	77.7%
b. up to 5 per day	1.9%	7.1%	10.7%	12.2%
c. 1/2 pack per day	0.4%	1.8%	3.6%	5.7%
d. 1 pack per day	0.2%	1.0%	2.0%	3.5%
e. more than 1 pack per day	0.2%	0.4%	0.7%	0.9%

39. Alcohol (beer, wine, wine coolers, hard liquor)

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4745	N=4888	N=3421	N=2322
a. None	87.2%	76.0%	60.0%	48.2%
b. 1-2 times	9.7%	15.1%	24.8%	28.8%
c. 3-5 times	1.9%	5.3%	8.9%	12.5%
d. 6-9 times	0.3%	1.5%	3.4%	5.3%
e. 10 or more	0.9%	2.2%	3.0%	5.2%

40. Marijuana or hashish (grass, hash, pot)

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4749	N=4893	N=3418	N=2323
a. None	98.7%	93.9%	86.8%	82.7%
b. 1-2 times	0.8%	3.3%	6.6%	8.4%
c. 3-5 times	0.2%	1.3%	3.0%	3.1%
d. 6-9 times	0.1%	0.6%	1.3%	1.5%
e. 10 or more	0.2%	0.9%	2.4%	4.3%

41. Cocaine (coke, crack, snow)

	Grade 6	Grade 8	Grade 10	Grade 12
	*	N=4857	N=3417	N=2325
a. None	*	98.0%	97.9%	98.0%
b. 1-2 times	*	1.2%	1.3%	1.3%
c. 3-5 times	*	0.4%	0.4%	0.4%
d. 6-9 times	*	0.2%	0.3%	0.1%
e. 10 or more	*	0.4%	0.2%	0.2%

42. Other illegal drugs (see 32 to 37 above)

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4750	N=4889	N=3418	N=2325
a. None	98.6%	95.0%	92.7%	91.8%
b. 1-2 times	1.0%	2.9%	4.3%	5.3%
c. 3-5 times	0.1%	0.9%	1.6%	1.7%
d. 6-9 times	0.1%	0.7%	0.8%	0.6%
e. 10 or more	0.2%	0.6%	0.6%	0.6%

How many of your closest friends use each of the following drugs once a month or more often:

43. Smoke cigarettes

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4730	N=4869	N=3415	N=2321
a. None	79.7%	50.6%	34.6%	26.2%
b. A few	14.3%	27.8%	29.3%	29.0%
c. Some	3.3%	12.4%	19.1%	20.6%
d. Most	1.7%	7.4%	14.5%	20.7%
e. All	1.0%	1.8%	2.5%	3.6%

44. Drink alcohol (beer, wine, wine coolers, hard liquor)

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4720	N=4864	N=3416	N=2320
a. None	80.4%	48.5%	22.6%	13.6%
b. A few	14.1%	28.2%	29.4%	25.0%
c. Some	3.6%	12.5%	22.2%	22.8%
d. Most	1.5%	9.0%	21.0%	30.0%
e. All	0.4%	1.9%	4.8%	8.6%

45. Smoke marijuana or hashish (grass, hash, pot)

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4719	N=4861	N=3410	N=2317
a. None	95.3%	77.0%	52.7%	42.6%
b. A few	3.3%	14.5%	25.1%	27.3%
c. Some	0.6%	4.6%	12.0%	17.1%
d. Most	0.5%	3.0%	8.4%	10.7%
e. All	0.3%	0.9%	1.8%	2.3%

46. Take other illegal drugs

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4720	N=4864	N=3407	N=2311
a. None	95.9%	81.5%	65.0%	59.0%
b. A few	2.8%	12.6%	22.2%	26.6%
c. Some	0.8%	3.7%	8.4%	9.5%
d. Most	0.4%	1.4%	3.6%	4.0%
e. All	0.1%	0.8%	0.7%	0.9%

The following questions ask about alcohol, cigarette, and marijuana use.

47. How do you usually get the beer, wine, or liquor you drink?

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4707	N=4823	N=3359	N=2300
a. I don't drink	85.8%	65.2%	44.5%	33.2%
b. From home and my parents know	8.3%	10.7%	9.7%	8.3%
c. From home, but my parents don't know	2.4%	5.7%	4.7%	1.9%
d. From friends	3.1%	15.2%	32.9%	41.3%
e. Ask adults to purchase or buy it myself	0.4%	3.2%	8.1%	15.3%

48. How much do you usually drink at one time?

	Grade 6 N=4725	Grade 8 N=4863	Grade 10 N=3404	Grade 12 N=2314
a. I don't drink	84.7%	64.2%	43.4%	33.4%
b. Less than one can or glass of beer, wine,	11.7%	17.2%	11.9%	7.6%
c. One can or glass of beer, wine, or mixed	2.0%	7.7%	10.9%	8.6%
d. 2-4 cans or glasses of beer, wine, or mixed	1.0%	6.2%	16.6%	24.0%
e. 5 or more cans or glasses of beer, wine, or	0.5%	4.7%	17.1%	26.4%

49. How old were you when you had your first full drink (a can of beer, a full glass of wine, or a mixed drink)?

	Grade 6 N=4679	Grade 8 N=4848	Grade 10 N=3394	Grade 12 N=2318
a. I have never had a full drink	83.3%	58.7%	34.6%	20.4%
b. 10 or younger	10.6%	14.8%	11.4%	11.1%
c. 11 or 12	5.5%	16.3%	16.2%	14.2%
d. 13 or 14	0.4%	9.6%	25.0%	24.5%
e. 15 or older	0.1%	0.6%	12.8%	29.7%

50. Think back over the last two weeks. How many times have you had five or more drinks in a row? (A drink is a glass of wine, a bottle of beer, a shot glass of liquor, or a mixed drink.)

	Grade 6 N=4728	Grade 8 N=4871	Grade 10 N=3404	Grade 12 N=2323
a. None	95.3%	89.3%	82.1%	72.7%
b. Once	2.9%	5.1%	8.2%	12.1%
c. Twice	1.0%	2.6%	4.5%	6.3%
d. 3 to 5 times	0.5%	1.9%	3.2%	5.8%
e. 6 or more times	0.3%	1.0%	2.0%	3.1%

51. How many drinks does it take for you to get drunk when you drink?

	Grade 6 *	Grade 8 N=4794	Grade 10 N=3396	Grade 12 N=2308
a. I don't get drunk.	*	76.3%	54.5%	39.5%
b. 2 or fewer	*	4.5%	4.5%	5.2%
c. 3 or 4	*	8.1%	14.9%	18.3%
d. 5 or 6	*	5.3%	13.7%	21.6%
e. 7 or more	*	5.8%	12.4%	15.5%

52. Have you ever used drugs and alcohol together?

	Grade 6 *	Grade 8 N=4812	Grade 10 N=3397	Grade 12 N=2298
a. I don't drink or use drugs	*	67.1%	46.8%	33.6%
b. No, never	*	25.4%	35.9%	39.9%
c. Once or twice	*	5.5%	11.5%	16.1%
d. Many times	*	2.1%	5.9%	10.4%

53. How old were you when you smoked your first cigarette?

	Grade 6 N=4700	Grade 8 N=4851	Grade 10 N=3409	Grade 12 N=2317
a. I have never smoked	84.1%	63.3%	50.4%	41.6%
b. 10 or younger	10.3%	16.4%	15.1%	12.9%
c. 11 or 12	4.8%	13.6%	14.0%	13.8%
d. 13 or 14	0.5%	6.4%	13.5%	14.2%
e. 15 or older	0.2%	0.2%	7.0%	17.5%

54. How do you usually get the cigarettes you smoke?

	Grade 6 *	Grade 8 N=4780	Grade 10 N=3396	Grade 12 N=2309
a. I don't smoke	*	74.4%	65.6%	61.5%
b. From adults	*	5.5%	4.6%	2.1%
c. From friends	*	15.8%	17.0%	10.7%
d. From a vending machine	*	1.4%	1.3%	0.7%
e. From a store	*	2.9%	11.5%	25.0%

55. How old were you when you first tried marijuana?

	Grade 6 *	Grade 8 N=4814	Grade 10 N=3404	Grade 12 N=2316
a. I have never tried marijuana	*	89.0%	74.6%	63.1%
b. 10 or younger	*	2.2%	2.9%	3.2%
c. 11 or 12	*	3.7%	3.9%	4.4%
d. 13 or 14	*	4.7%	9.7%	9.4%
e. 15 or older	*	0.4%	8.9%	19.9%

How much do you think people risk harming themselves if they:

56. Smoke one or more packs of cigarettes a day

	Grade 6 N=4697	Grade 8 N=4858	Grade 10 N=3405	Grade 12 N=2316
a. No risk	9.0%	3.9%	1.9%	0.8%
b. Slight risk	8.2%	8.3%	5.1%	4.3%
c. Moderate risk	24.2%	28.3%	27.7%	23.8%
d. Great risk	41.4%	48.4%	59.3%	67.1%
e. Not sure	17.2%	11.1%	6.0%	4.1%

57. Smoke marijuana occasionally

	Grade 6 N=4702	Grade 8 N=4857	Grade 10 N=3405	Grade 12 N=2314
a. No risk	9.3%	4.8%	4.0%	5.4%
b. Slight risk	6.3%	10.2%	14.4%	20.4%
c. Moderate risk	21.8%	30.8%	36.9%	34.8%
d. Great risk	50.2%	44.4%	39.3%	35.3%
e. Not sure	12.4%	9.8%	5.3%	4.2%

58. Try cocaine once or twice

	Grade 6	Grade 8	Grade 10	Grade 12
	*	N=4817	N=3404	N=2313
a. No risk	*	4.9%	2.4%	1.9%
b. Slight risk	*	17.3%	13.1%	12.5%
c. Moderate risk	*	25.8%	22.6%	21.4%
d. Great risk	*	41.9%	55.8%	59.4%
e. Not sure	*	10.1%	6.1%	4.8%

59. Have one or two drinks nearly every day

	Grade 6	Grade 8	Grade 10	Grade 12
	*	N=4811	N=3405	N=2312
a. No risk	*	6.4%	3.4%	3.4%
b. Slight risk	*	18.0%	13.8%	12.3%
c. Moderate risk	*	35.4%	34.4%	33.3%
d. Great risk	*	31.3%	43.1%	47.5%
e. Not sure	*	8.8%	5.3%	3.4%

60. Have five or more drinks once or twice each weekend

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4685	N=4843	N=3394	N=2310
a. No risk	10.3%	5.0%	3.2%	3.5%
b. Slight risk	17.2%	10.2%	10.8%	13.5%
c. Moderate risk	30.5%	31.2%	32.2%	34.2%
d. Great risk	28.5%	43.2%	48.2%	45.1%
e. Not sure	13.5%	10.3%	5.6%	3.8%

61. What is the risk of getting AIDS from injecting drugs with a needle that a someone else has used?

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4694	N=4854	N=3408	N=2310
a. No risk	8.1%	3.1%	1.2%	1.0%
b. Slight risk	2.7%	2.2%	2.0%	1.1%
c. Moderate risk	7.6%	10.2%	9.2%	8.6%
d. Great risk	73.8%	77.6%	82.4%	85.8%
e. Not sure	7.8%	6.8%	5.2%	3.5%

How would your parents feel about your doing each of the following:

62. Smoking marijuana occasionally

	Grade 6	Grade 8	Grade 10	Grade 12
	*	N=4523	N=3248	N=2182
a. Approve	*	2.3%	1.7%	2.2%
b. Not disapprove	*	2.6%	3.5%	4.4%
c. Disapprove	*	8.5%	11.5%	15.2%
d. Greatly disapprove	*	86.6%	83.3%	78.2%

63. Having one or two drinks nearly every day

	Grade 6 *	Grade 8 N=4530	Grade 10 N=3249	Grade 12 N=2187
a. Approve	*	2.5%	1.0%	1.5%
b. Not disapprove	*	3.2%	3.2%	4.5%
c. Disapprove	*	13.6%	15.6%	19.7%
d. Greatly disapprove	*	80.7%	80.2%	74.3%

64. Having five or more drinks once or twice each weekend

	Grade 6 *	Grade 8 N=4519	Grade 10 N=3241	Grade 12 N=2194
a. Approve	*	2.5%	1.5%	1.9%
b. Not disapprove	*	3.1%	5.1%	8.5%
c. Disapprove	*	11.1%	14.5%	20.6%
d. Greatly disapprove	*	83.4%	78.9%	69.0%

65. Attending a party in a friend's home where beer, wine, or liquor were available to you

	Grade 6 *	Grade 8 N=4529	Grade 10 N=3299	Grade 12 N=2238
a. Approve	*	4.0%	4.5%	7.5%
b. Not disapprove	*	8.8%	16.7%	28.1%
c. Disapprove	*	23.1%	31.7%	32.3%
d. Greatly disapprove	*	64.1%	47.1%	32.1%

The next questions ask about drug education.

66. Where have you learned the most about the dangers of drugs and drinking?

	Grade 6 N=4618	Grade 8 N=4740	Grade 10 N=3328	Grade 12 N=2288
a. Family or people I live with	26.7%	21.0%	21.4%	22.6%
b. School	62.5%	64.7%	56.0%	48.2%
c. Other kids	2.0%	3.6%	7.1%	9.7%
d. Church or temple	1.3%	1.6%	1.8%	2.2%
e. TV, movies, or newspaper	7.5%	9.0%	13.6%	17.4%

67. At what grade level do you think alcohol and other drug education should begin?

	Grade 6 N=4641	Grade 8 N=4796	Grade 10 N=3387	Grade 12 N=2303
a. 3rd or earlier	43.7%	41.3%	41.4%	43.4%
b. 4th or 5th	31.0%	40.1%	34.5%	33.0%
c. 6th, 7th, or 8th	11.7%	13.4%	20.8%	20.5%
d. 9th or 10th	3.4%	1.9%	1.6%	2.0%
e. 11th or 12th	10.3%	3.3%	1.6%	1.1%

68. In your school, which of the following people has been most active in trying to help reduce alcohol and other drug use among the students?

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4438	N=4685	N=3303	N=2235
a. The principal or assistant principal	18.9%	18.9%	15.4%	13.5%
b. A teacher	30.5%	26.1%	18.2%	22.4%
c. A counselor or nurse	15.4%	18.4%	17.6%	15.5%
d. Another school staff member	9.7%	4.9%	5.9%	6.4%
e. None of these have been very active	25.4%	31.7%	42.9%	42.2%

69. In your opinion, which of the following prevention programs is doing the best job of preventing or helping stop alcohol and other drug use in your school?

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4614	N=4701	N=3280	N=2245
a. Here's Looking At You (II or 2000)	4.7%	3.1%	2.0%	0.8%
b. D.A.R.E.	85.8%	66.9%	40.3%	33.8%
c. Natural Helpers or other Peer Assistance	2.2%	6.8%	12.8%	11.7%
d. None of the above are helping, but we have something else that is.	2.2%	6.2%	6.6%	7.6%
e. Nothing is really helping prevent or stop alcohol and other drug use in my school.	4.0%	17.0%	38.2%	46.1%

70. How important does preventing and reducing alcohol and other drug use seem to be to teachers and staff at your school?

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4390	N=4648	N=3283	N=2231
a. It is one of the most important goals we have in our school	47.0%	27.2%	13.5%	10.4%
b. It is fairly important, but many other things are a higher priority	34.7%	37.9%	41.5%	40.1%
c. It is mentioned, but doesn't seem to be	13.1%	26.6%	37.0%	40.6%
d. It is not important at all	5.1%	8.3%	8.1%	9.0%

71. Which of the following people, who do not work in your school, have been most active in trying to help reduce alcohol and other drug use among the students?

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4420	N=4663	N=3295	N=2239
a. A counselor or health professional	9.4%	10.2%	8.3%	8.4%
b. A police officer	54.1%	35.6%	25.7%	24.2%
c. A minister, priest or some religious leader	3.6%	6.4%	8.5%	7.0%
d. Someone else from outside the school	17.6%	20.6%	22.9%	21.8%
e. No one from outside the school has gotten very involved in this	15.4%	27.2%	34.7%	38.7%

72. Who would you go to first if you wanted to talk about a problem related to alcohol or other drug use in yourself or a friend?

	Grade 6 N=4542	Grade 8 N=4718	Grade 10 N=3353	Grade 12 N=2282
a. A teacher or counselor	21.9%	19.5%	11.0%	10.0%
b. Another student	14.0%	29.2%	35.7%	36.6%
c. Someone in my family	50.1%	32.0%	28.2%	24.4%
d. Someone other than those mentioned	7.5%	11.7%	17.4%	22.0%
e. No one, I would keep it to myself	6.5%	7.7%	7.7%	7.0%

73. Which of the following do you think is most important in helping to reduce alcohol and other drug use in your school among students your age?

	Grade 6 N=4330	Grade 8 N=4622	Grade 10 N=3308	Grade 12 N=2244
a. Class presentations on types of drugs and their effects on people.	28.5%	22.5%	13.2%	11.8%
b. Having someone at school who can listen to and help students who are using alcohol or other drugs.	25.2%	22.6%	16.7%	16.2%
c. Bringing people in from outside of school to talk about the problems of alcohol or	23.5%	25.9%	27.1%	24.7%
d. Groups of students working together to persuade other students not to use alcohol	12.4%	14.3%	22.2%	23.6%
e. None of the above can really help reduce alcohol or other drug use.	10.3%	14.7%	20.7%	23.7%

If you or a friend had a problem with alcohol or other drugs, does your school provide:

74. A counselor or other school staff to discuss the problem

	Grade 6 N=4509	Grade 8 N=4673	Grade 10 N=3328	Grade 12 N=2266
a. Yes	57.0%	72.4%	71.4%	73.4%
b. No	8.7%	6.9%	4.7%	6.4%
c. I'm not sure	34.2%	20.8%	23.9%	20.3%

75. A support group (or rap group) of students with similar concerns

	Grade 6 N=4419	Grade 8 N=4645	Grade 10 N=3313	Grade 12 N=2249
a. Yes	18.9%	24.9%	32.1%	36.2%
b. No	30.2%	34.2%	22.4%	26.9%
c. I'm not sure	50.9%	40.9%	45.5%	36.9%

76. Students to talk to who have been trained to assist students with problems and to refer them to help. These may be called Peer Assistants, Peer Counselors, Natural Helpers, Peer Helpers, or Peer Listeners.

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4383	N=4632	N=3305	N=2255
a. Yes	21.8%	34.9%	53.8%	57.5%
b. No	26.3%	28.8%	14.8%	17.6%
c. I'm not sure	51.9%	36.2%	31.4%	25.0%

The next questions ask about the effects of media advertising on alcohol use.

77. Whom do you think beer, wine and alcohol advertising is primarily aimed at?

	Grade 6	Grade 8	Grade 10	Grade 12
	*	N=4635	N=3343	N=2278
a. Primarily at adults	*	20.4%	17.9%	19.4%
b. Primarily at teens and adolescents	*	31.5%	24.1%	22.7%
c. Both adults and adolescents to the same	*	35.7%	46.1%	48.9%
d. No one in particular	*	12.3%	11.8%	9.0%

78. Do you think beer, wine and alcohol advertising influences young people to drink?

	Grade 6	Grade 8	Grade 10	Grade 12
	*	N=4453	N=3255	N=2230
a. Yes, more young people drink because of the way alcohol is advertised.	*	76.3%	69.6%	67.7%
b. No, the advertising has no effect on how many young people drink.	*	23.7%	30.4%	32.3%

79. Where do you notice most of the beer, wine and alcohol advertising?

	Grade 6	Grade 8	Grade 10	Grade 12
	*	N=4588	N=3304	N=2250
a. On TV	*	72.4%	72.5%	74.0%
b. On the radio	*	3.1%	2.6%	1.8%
c. In print (magazines, newspapers, etc.)	*	14.8%	15.4%	14.4%
d. On billboards, buildings, and signs	*	9.7%	9.5%	9.8%

80. Does beer, wine and alcohol advertising make it look more attractive to drink than it actually is?

	Grade 6	Grade 8	Grade 10	Grade 12
	*	N=4528	N=3292	N=2246
a. Yes, a lot more attractive	*	52.6%	50.2%	48.4%
b. Yes, in some cases, but not all	*	32.5%	35.8%	37.5%
c. No, it doesn't make drinking look more attractive	*	14.9%	14.0%	14.1%

81. If you were going to try to reduce the amount of alcohol and other drug use among young people your age, which one of the following do you think is most important to do?

	Grade 6 *	Grade 8 N=4526	Grade 10 N=3292	Grade 12 N=2234
a. More school programs encouraging students not to use alcohol or other drugs.	*	24.8%	16.5%	13.7%
b. Reducing or eliminating alcohol advertising on radio and TV.	*	27.0%	17.7%	15.1%
c. Stiffer penalties and stronger enforcement for kids caught using alcohol or other	*	17.8%	25.9%	25.0%
d. More community activities giving kids other things to do besides using alcohol or	*	18.9%	24.8%	31.5%
e. None of the above will help reduce alcohol and other drug use among young people	*	11.5%	15.1%	14.7%

The next questions ask about medical care.

82. My family has health/medical insurance.

	Grade 6 N=4373	Grade 8 N=4583	Grade 10 N=3310	Grade 12 N=2250
a. Yes	71.8%	79.4%	85.9%	88.0%
b. No	4.0%	5.5%	6.3%	7.9%
c. Don't know	24.2%	15.1%	7.8%	4.1%

83. How does your family pay for medical (doctor, dentist, etc.) care?

	Grade 6 N=4345	Grade 8 N=4555	Grade 10 N=3318	Grade 12 N=2245
a. Health insurance	37.2%	49.7%	62.3%	73.2%
b. Medical Assistance	6.4%	8.6%	8.2%	7.3%
c. We have no coverage	4.3%	4.1%	5.1%	5.7%
d. Don't know	52.1%	37.5%	24.4%	13.8%

84. Is there one place where you usually go for medical care?

	Grade 6 N=4396	Grade 8 N=4585	Grade 10 N=3327	Grade 12 N=2259
a. No one usual place	12.5%	12.4%	11.5%	9.2%
b. Doctor's office	56.1%	58.9%	65.4%	66.0%
c. Hospital, public health or community	20.5%	18.3%	15.4%	18.4%
d. Hospital emergency room	5.6%	5.5%	4.1%	3.3%
e. Other	5.3%	4.9%	3.5%	3.1%

85. When did you last see a doctor for a check-up (regular physical exam)?

	Grade 6 N=4426	Grade 8 N=4607	Grade 10 N=3344	Grade 12 N=2263
a. Within the last year	57.8%	64.4%	69.5%	65.8%
b. 1 to 2 years ago	9.5%	12.5%	14.1%	15.8%
c. Over 2 years ago	3.4%	4.8%	5.5%	8.0%
d. I don't remember	26.8%	15.6%	9.2%	8.9%
e. Never	2.5%	2.7%	1.8%	1.5%

86. When did you last see a dentist (not for braces)?

	Grade 6 N=4447	Grade 8 N=4618	Grade 10 N=3341	Grade 12 N=2266
a. Within the last 6 months	55.5%	55.7%	56.3%	49.1%
b. Within the last year	18.1%	19.3%	20.9%	24.5%
c. 1 to 2 years ago	8.1%	11.0%	12.5%	15.0%
d. I don't remember	14.8%	11.5%	8.8%	9.7%
e. Never	3.5%	2.5%	1.6%	1.7%

The following questions deal with safety.

87. During the past 30 days, how many times have you been in a car, truck or on a motorcycle driven by someone who has been drinking alcohol or using drugs?

	Grade 6 N=4466	Grade 8 N=4606	Grade 10 N=3336	Grade 12 N=2266
a. None	81.4%	77.5%	71.2%	64.7%
b. 1 time	6.9%	9.8%	13.0%	14.8%
c. 2 or 3 times	4.4%	6.5%	9.4%	11.9%
d. 4 or 5 times	2.0%	2.3%	2.2%	3.6%
e. 6 or more times	5.3%	3.8%	4.2%	4.9%

88. During the past 30 days, how many times did you drive a car, truck or motorcycle while or after drinking alcohol or using drugs?

	Grade 6 *	Grade 8 N=4570	Grade 10 N=3337	Grade 12 N=2270
a. None	*	90.4%	90.0%	78.6%
b. 1 time	*	3.7%	4.6%	10.7%
c. 2 or 3 times	*	3.0%	2.7%	6.1%
d. 4 or 5 times	*	1.3%	1.2%	2.0%
e. 6 or more times	*	1.6%	1.6%	2.5%

89. How often do you wear a seat belt when riding in a car or truck driven by someone else?

	Grade 6 N=4464	Grade 8 N=4603	Grade 10 N=3341	Grade 12 N=2267
a. Never	5.6%	8.1%	5.2%	5.7%
b. Rarely	6.3%	9.4%	8.7%	8.9%
c. Sometimes	10.0%	12.4%	10.3%	11.2%
d. Most of the time	26.8%	29.2%	30.9%	25.9%
e. Always	51.3%	40.9%	44.9%	48.3%

90. When you rode a bicycle during the past 12 months, how often did you wear a helmet?

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4462	N=4593	N=3336	N=2267
a. Did not ride bicycle in past year	12.1%	19.1%	32.7%	46.6%
b. Never	44.5%	57.3%	52.2%	41.7%
c. Sometimes	14.5%	9.6%	6.0%	4.0%
d. Most of the time	11.2%	7.1%	4.5%	3.2%
e. Always	17.7%	7.0%	4.6%	4.5%

91. When you rode a motorcycle during the past 12 months, how often did you wear a helmet?

	Grade 6	Grade 8	Grade 10	Grade 12
	*	N=4569	N=3335	N=2265
a. Did not ride a motorcycle in past year	*	63.5%	66.0%	66.8%
b. Never	*	9.8%	9.3%	7.0%
c. Sometimes	*	4.0%	3.7%	2.6%
d. Most of the time	*	4.6%	3.7%	4.0%
e. Always	*	18.1%	17.3%	19.6%

92. During the past 12 months, when you went swimming in places such as a pool, lake or ocean, how often was an adult or a lifeguard watching you?

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4451	N=4578	N=3328	N=2258
a. Did not go swimming in past year	6.5%	8.1%	8.1%	10.5%
b. Never	6.1%	11.5%	20.0%	31.4%
c. Sometimes	14.1%	27.7%	34.6%	33.7%
d. Most of the time	23.7%	27.4%	21.3%	14.3%
e. Always	49.5%	25.4%	16.0%	10.1%

93. During the past 30 days, how many times have you carried a weapon, such as a gun, knife or club, for self-protection or because you thought you might need it in a fight?

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4425	N=4579	N=3325	N=2263
a. None	83.4%	76.4%	77.8%	79.8%
b. 1 time	6.9%	8.6%	7.5%	6.2%
c. 2 or 3 times	3.7%	6.3%	5.6%	4.7%
d. 4 or 5 times	1.6%	2.1%	1.7%	1.5%
e. 5 or more times	4.4%	6.6%	7.4%	7.8%

94. Have you ever carried a weapon to school?

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4318	N=4452	N=3260	N=2239
a. Yes	15.2%	24.0%	23.9%	23.4%
b. No	84.8%	76.0%	76.1%	76.6%

95. What kind of weapon did you usually carry? Choose the one best answer.

	Grade 6 N=4385	Grade 8 N=4544	Grade 10 N=3292	Grade 12 N=2256
a. Did not carry weapon	80.8%	71.8%	72.8%	73.6%
b. Handgun	2.8%	5.8%	4.6%	4.0%
c. Rifle or shotgun	2.3%	2.9%	2.4%	2.0%
d. Knife or razor	10.4%	15.3%	15.5%	13.9%
e. Club, stick, bat, pipe, or some other	3.8%	4.3%	4.6%	6.5%

96. During the past 12 months, how many times have you been in a physical fight in which you or the person you were fighting were injured and had to be treated by a doctor or a nurse?

	Grade 6 N=4429	Grade 8 N=4551	Grade 10 N=3317	Grade 12 N=2261
a. None	84.4%	81.2%	84.4%	87.0%
b. 1 time	8.7%	9.1%	7.8%	6.1%
c. 2 or 3 times	3.4%	5.5%	4.3%	3.9%
d. 4 or 5 times	1.2%	1.7%	1.4%	1.5%
e. 6 or more times	2.3%	2.4%	2.1%	1.5%

97. Who did you fight with the last time you were in a physical fight?

	Grade 6 N=4367	Grade 8 N=4546	Grade 10 N=3309	Grade 12 N=2255
a. Have not been in a fight	62.5%	58.2%	58.8%	62.1%
b. A stranger	6.9%	10.3%	11.4%	11.9%
c. A friend or someone I know	21.1%	21.6%	19.1%	16.3%
d. A boyfriend, girlfriend, or date	1.7%	1.9%	2.2%	2.4%
e. A family member	7.8%	7.9%	8.5%	7.3%

The following questions deal with your diet and weight.

98. Do you think of yourself as:

	Grade 6 N=4331	Grade 8 N=4487	Grade 10 N=3285	Grade 12 N=2249
a. Too thin (underweight)	10.5%	11.2%	10.2%	10.5%
b. About the right weight	71.6%	63.0%	61.1%	62.2%
c. Too fat (overweight)	17.9%	25.8%	28.7%	27.3%

99. Which of the following are you trying to do about your weight?

	Grade 6 N=4331	Grade 8 N=4499	Grade 10 N=3299	Grade 12 N=2246
a. Not trying to do anything about my weight	45.2%	34.6%	30.7%	30.4%
b. Trying to lose weight	24.8%	31.4%	35.0%	32.9%
c. Trying to keep from gaining any more	21.9%	22.6%	20.4%	22.0%
d. Trying to gain more weight	8.2%	11.5%	13.8%	14.6%

100. Think about all the meals and snacks you ate yesterday. How many servings of green or yellow vegetables (salad, corn, carrots, green beans, etc.) or fruit (glass of fruit juice, apple, orange, etc.) did you have yesterday?

	Grade 6 N=4312	Grade 8 N=4485	Grade 10 N=3283	Grade 12 N=2238
a. Did not eat vegetables or fruit yesterday	16.6%	16.6%	18.3%	20.3%
b. 1 or 2 servings	43.6%	45.4%	45.7%	48.0%
c. 3 or 4 servings	27.1%	27.2%	27.0%	24.6%
d. 5 or 6 servings	6.7%	6.9%	6.5%	5.0%
e. 7 or more servings	5.9%	3.9%	2.5%	2.1%

The following questions ask about physical activity and exercise.

101. On how many of the past 7 days have you done at least 20 minutes of hard exercise that made you breathe heavily and made your heart beat fast? (For example, playing basketball, jogging, fast dancing or fast bicycling)

	Grade 6 N=4337	Grade 8 N=4387	Grade 10 N=3277	Grade 12 N=2225
a. None	14.3%	13.0%	16.2%	23.1%
b. 1 day	15.2%	12.9%	11.8%	16.3%
c. 2 or 3 days	28.6%	26.8%	23.3%	22.9%
d. 4 or 5 days	16.8%	22.2%	22.9%	19.6%
e. 6 or 7 days	25.1%	25.1%	25.8%	18.1%

102. During the past 14 days, on an average school day, how many hours a day did you watch television, or videos, or play computer games before or after school?

	Grade 6 N=4321	Grade 8 N=4371	Grade 10 N=3260	Grade 12 N=2218
a. None	12.2%	8.4%	8.6%	7.3%
b. 1 hour or less per day	24.9%	22.2%	26.1%	31.8%
c. More than 1 but less than 3 hours per day	34.7%	39.4%	38.9%	39.7%
d. Between 3 and 5 hours per day	16.8%	21.2%	19.3%	15.5%
e. More than 5 hours per day	11.4%	8.9%	7.1%	5.8%

The next questions ask about HIV/AIDS education.

103. Do you know where to get useful information about AIDS/HIV infection?

	Grade 6 N=4298	Grade 8 N=4133	Grade 10 N=3224	Grade 12 N=2197
a. Yes	66.9%	75.9%	80.6%	85.8%
b. No	14.6%	9.6%	7.1%	5.0%
c. Not sure	18.5%	14.5%	12.3%	9.2%

104. Have you ever talked about AIDS/HIV infection with your parents or other adults in your family?

	Grade 6 N=4284	Grade 8 N=4132	Grade 10 N=3229	Grade 12 N=2206
a. Yes	63.0%	59.1%	66.0%	65.7%
b. No	29.6%	33.8%	29.0%	29.9%
c. Not sure	7.4%	7.1%	5.0%	4.4%

105. At what grade level do you think students should begin education about sexually transmitted diseases?

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4292	N=4164	N=3243	N=2206
a. 3rd grade or earlier	18.3%	18.5%	21.1%	22.1%
b. 4th or 5th grade	51.0%	47.8%	38.2%	37.6%
c. 6th, 7th, or 8th grade	24.5%	30.9%	37.4%	37.2%
d. 9th or 10th grade	3.0%	1.6%	2.5%	2.4%
e. 11th or 12th grade	3.2%	1.3%	0.9%	0.6%

106. How honestly did you answer this survey?

	Grade 6	Grade 8	Grade 10	Grade 12
	N=4190	N=4099	N=3215	N=2200
a. Very honestly	90.0%	89.7%	94.4%	95.4%
b. Somewhat honestly	10.0%	10.3%	5.6%	4.6%
c. Dishonestly	0.0%	0.0%	0.0%	0.0%

107. Have you ever had any kind of sexual experience with a male or female?

	Grade 6	Grade 8	Grade 10	Grade 12
	*	N=2796	N=2607	N=1787
a. No	*	57.2%	35.0%	21.7%
b. Yes, with a male	*	19.2%	34.9%	40.4%
c. Yes, with a female	*	21.4%	27.9%	34.4%
d. Both male and female	*	2.2%	2.1%	3.5%

108. Have you ever been physically abused or mistreated by an adult?

	Grade 6	Grade 8	Grade 10	Grade 12
	*	N=2752	N=2582	N=1767
a. Yes	*	16.4%	18.6%	19.4%
b. No	*	83.6%	81.4%	80.6%

109. Have you ever been sexually abused? (Sexual abuse is when someone in your family or someone else touches you in a sexual way in a place you did not want to be touched, or does something to you sexually which they shouldn't have done.)

	Grade 6	Grade 8	Grade 10	Grade 12
	*	N=2709	N=2565	N=1766
a. Yes	*	12.8%	16.7%	18.3%
b. No	*	87.2%	83.3%	81.7%

110. Have you ever had sexual intercourse (gone all the way)?

	Grade 6	Grade 8	Grade 10	Grade 12
	*	N=2690	N=2564	N=1763
a. Yes	*	23.2%	42.4%	59.9%
b. No	*	76.8%	57.6%	40.1%

111. With how many people have you had sexual intercourse in your life?

	Grade 6	Grade 8	Grade 10	Grade 12
	*	N=2729	N=2594	N=1770
a. Have never had sexual intercourse	*	76.9%	59.1%	40.8%
b. 1 person	*	10.7%	16.8%	21.0%
c. 2 or 3 people	*	6.0%	13.0%	18.5%
d. 4 or 5 people	*	2.5%	4.7%	9.6%
e. 6 or more people	*	4.0%	6.4%	10.1%

112. How old were you the first time you had sexual intercourse?

	*	N=2699	N=2580	N=1767
a. Have never had sexual intercourse	*	76.4%	58.1%	39.1%
b. 12 years old or younger	*	12.9%	7.3%	6.3%
c. 13 or 14 years old	*	9.8%	17.2%	14.1%
d. 15 or 16 years old	*	0.8%	16.4%	28.8%
e. 17 years old or older	*	0.2%	1.0%	11.7%

113. Did you drink alcohol or use drugs before you had sexual intercourse the last time?

	Grade 6	Grade 8	Grade 10	Grade 12
	*	N=2688	N=2561	N=1753
a. Have never had sexual intercourse	*	74.4%	57.0%	38.2%
b. Yes	*	5.9%	10.8%	14.4%
c. No	*	19.6%	32.3%	47.4%

114. The last time you had sexual intercourse, what method did you or your partner use to prevent pregnancy?

	Grade 6	Grade 8	Grade 10	Grade 12
	*	N=2679	N=2563	N=1735
a. Have never had sexual intercourse	*	77.5%	58.3%	39.7%
b. No method was used	*	6.7%	8.9%	10.7%
c. Birth control pills	*	1.9%	5.6%	15.7%
d. Condoms	*	12.9%	23.4%	28.1%
e. Withdrawal or some other method	*	0.9%	3.8%	5.8%

115. How many times have you been pregnant or gotten someone pregnant?

	Grade 6	Grade 8	Grade 10	Grade 12
	*	N=2682	N=2581	N=1763
a. Have never been pregnant or gotten	*	93.8%	91.2%	88.3%
b. 1 time	*	2.6%	4.4%	8.1%
c. 2 or more times	*	1.7%	1.9%	1.7%
d. Not sure	*	1.9%	2.5%	1.9%

116. The last time you had sexual intercourse, did you or your partner use a condom to prevent sexually transmitted diseases (VD) such as genital herpes, genital warts, gonorrhea, clap, drip, chlamydia or AIDS/HIV infection?

	Grade 6	Grade 8	Grade 10	Grade 12
	*	N=2664	N=2553	N=1748
a. Have never had sexual intercourse	*	77.5%	59.7%	41.2%
b. Yes	*	13.6%	24.7%	29.4%
c. No	*	8.9%	15.6%	29.3%

Sometimes people feel so depressed and hopeless about the future that they may consider attempting suicide, that is, taking some action to end their own life.

117. During the past 12 months, have you ever seriously thought about attempting suicide?

	Grade 6	Grade 8	Grade 10	Grade 12
	*	N=2693	N=2511	N=1734
a. Yes	*	19.8%	23.9%	18.9%
b. No	*	80.2%	76.1%	81.1%

118. During the past 12 months, did you make a specific plan about how you would attempt suicide?

	Grade 6	Grade 8	Grade 10	Grade 12
	*	N=2714	N=2510	N=1734
a. Yes	*	11.8%	14.2%	12.1%
b. No	*	88.2%	85.8%	87.9%

119. During the past 12 months, how many times did you actually make a suicide attempt?

	Grade 6	Grade 8	Grade 10	Grade 12
	*	N=2710	N=2534	N=1746
a. None	*	89.1%	86.9%	90.7%
b. 1 time	*	7.4%	9.0%	6.8%
c. 2 or 3 times	*	2.1%	2.4%	1.7%
d. 4 or 5 times	*	0.7%	0.9%	0.3%
e. 6 or more times	*	0.6%	0.8%	0.5%

120. If you attempted suicide during the past 12 months, did that attempt result in an injury, poisoning or overdose that had to be treated by a doctor or a nurse?

	Grade 6	Grade 8	Grade 10	Grade 12
	*	N=2656	N=2487	N=1709
a. Did not attempt suicide	*	85.5%	83.0%	85.2%
b. Yes	*	5.3%	6.6%	5.4%
c. No	*	9.2%	10.4%	9.4%

Appendix B

Technical Approach

Technical Approach

In the fall of 1988, the Office of the Superintendent of Public Instruction (OSPI) and the Northwest Regional Educational Laboratory (NWREL) collaborated in a study to determine the extent and nature of substance use among public school students in the state of Washington (Deck & Nickel, 1989). In the fall of 1990, the survey of alcohol and other drug use was again administered to sixth, eighth, and tenth grade students and was administered for the first time to twelfth grade students in a sample of schools across the state. Many of the questions from those surveys were again asked in the present survey which was administered in December, 1992. In addition, questions from the Youth Risk Behavior Survey (United States Centers for Disease Control, 1990) were integrated into the survey questionnaire. In this appendix, the development of the survey and its special scales, the implementation of the sampling plan, and other methodological issues are discussed.

Design of the Survey

Approximately half of the questions for the Washington State Survey of Adolescent Health Behaviors were drawn from NWREL's Alcohol and Drug Use Survey, an instrument which has been administered to over 250,000 students in the Northwest and Hawaii over the past six years. This survey was developed from a review of national and state student use surveys. Some of the questions were taken directly from the most comprehensive and continuing national survey, the University of Michigan's Monitoring the Future survey (Johnston, Bachman, and O'Malley, 1990). Areas of emphasis in the survey include basic student demographics, use of substances, risk factors predicting future use, perception of harmfulness of certain drugs, perceived parent attitudes, estimates of friends' use, and questions concerning alcohol and drug education. The questions were edited for clarity and readability by an editor of children's material, elementary and secondary teachers, and substance abuse advisory committees.

The survey was extended this year with the addition of critical items from the Youth Health Risk Behavior Survey which was developed by the CDC. Some questions from that survey were modified so that they would be compatible with the present survey's five-response-option format. Questions were selected to fill Washington's need for information on behaviors related to safety, health, sexual activity, suicide and abuse.

Development of Special Scales

Since the survey asks students to indicate the frequency with which they engage in many behaviors, it is difficult at times to determine the severity of problems just from the frequency of responses to individual items. Are the same few students engaging in many behaviors which indicate a health risk or are different students engaging in these behaviors? To facilitate interpretation, three summary scales were developed that combine the data from several items.

Drug Use Scale. The Drug Use Scale is based on the type of drug used, the frequency of use, and the use of multiple drugs. Experimentation with marijuana is usually considered less harmful than experimentation with more powerful and addictive drugs like cocaine and heroin. Of course, frequent use of marijuana is also very harmful. Tobacco, steroids, and over-the-counter drugs were not considered in computing the scale. Alcohol use was treated separately in an Alcohol Use Scale.

The four levels of drug use were defined as follows:

1. **No use.** Student has never tried drugs in his or her lifetime.

2. **Low use**. Student has tried at least one drug but is not a frequent user and may not be currently using any drug. This may be considered experimental use.

3. **Moderate use**. Student is using one or more drugs more regularly (e.g., monthly or weekly use of marijuana) or is experimenting with very addictive drugs like cocaine or opiates.

4. **High use**. The student uses drugs frequently and risk of addiction is very high. Typically this implies daily use of marijuana or use of cocaine at least monthly. The level is defined by one or more of the following: a) daily use of marijuana, depressants, stimulants, tranquilizers, or inhalants; b) monthly or more frequent use of cocaine, opiates, or hallucinogens; or c) weekly use of two or more drugs.

Alcohol Use Scale. The Alcohol Use Scale is based on both the quantity and frequency of alcohol consumption. This scale follows the concept used by others in rating drinking habits of adults (Jessor & Jessor, 1978), but modified for adolescents.

The four levels of alcohol use were defined as follows:

1. **No use**. Student has not tried beer, wine, wine coolers, or hard liquor in his or her lifetime.

2. **Low use**. Student has tried alcohol but is either an infrequent user or is no longer using alcohol.

3. **Moderate use**. Student drinks alcohol at least monthly or binge drinks (five or more drinks consumed at one time) occasionally.

4. **High use**. Student drinks daily or binge drinks at least monthly. The risks of alcoholism, accidents due to drunk driving, or other problems are high.

These cutoff points may be considered by some as too conservative, i.e., labeling students heavy users when others might consider that drinking moderate. However, the research literature suggests that drinking has more damaging effects on adolescents. Regular use during this time of rapid physiological, social, and emotional development is considered by many to be particularly dangerous (Hawley, 1984).

Health Risk Scale. Previous administrations of the Washington statewide survey of student alcohol and other drug use included a Risk Scale. Based on the work of Hawkins (1986) and others, this scale was made up of items related to various factors determined to influence the likelihood that students would become involved in AOD use. By design, this scale was not made up of items related to students' own actual AOD use. Rather, the scale was based on the idea that just as we can identify adults with highest risk of heart disease by looking at their behavior, heredity, and other factors, we can identify students who are most likely to use drugs or alcohol. (However, there is no guarantee that a high risk student will actually use alcohol or other drugs in the future or that a low risk student will refrain.) With the present administration of the expanded survey of student health behaviors, the risk scale has been completely revised. The new Health Risk Scale is intended to indicate the likelihood of *need for student services*. The scale is based on both items related to risk factors of AOD use (but not actual use items) and items from the other topic areas covered by the survey (most of which are related to actual behaviors). Thus, the Health Risk Scale is quite broad in nature, and should not be compared with previous results on the earlier Risk Scale.

At this time the new Health Risk Scale should be interpreted with caution. Although rooted solidly in theory, and therefore conceptually sound, little study has gone into the reliability and validity of the scale. An initial factor analysis yielded two main factors, one indicating risk for AOD use, and another indicating risk for other health behaviors. Although reassuring in that the two main factors relate highly to the two basic groups of survey items, having two factors within one scale poses some problem for interpretation. The reader must remember that students placed at moderate or high risk on this scale may be due to risk of AOD use, risk of other health behaviors, or both. Clearly, while the Health Risk Scale is a useful general tool, it calls for further study of its psychometric characteristics.

The Health Risk Scale is made up of the following items. The response options for each item are valued one to five, with one indicating low risk and five indicating high risk. Students then received an average score, based on the number of items they answered. An average score of less than two was considered "low" risk, an average score of two or more but less than three was considered "moderate" risk, and an average score of three or greater was considered "high" risk. The items included in the scale were:

4 How much school missed
5 Grades
12 Thought of dropping out
14 Parents know where I am
18 Substance use at parties
44 Friends drink
49 Age of first drink
53 Age of first cigarette
58 Perceived risk from cocaine
60 Perceived risk from 5 or more drinks
72 Who student would talk to
85 When was last checkup
87 Number of times rode with substance user
93 Carried weapon in last 30 days
96 Frequency of fights with injuries
98 Perceived weight
101 Amount of exercise last 7 days
108 Ever physically abused
109 Ever sexually abused
111 Frequency of sexual intercourse
112 Age of first sexual intercourse
116 Use of condom
117 Thought about suicide
119 Frequency of suicide attempts

Interpretation. These scales are intended to be used primarily for comparisons since the exact placement of the cutoffs for levels of use could be open for discussion. Thus, knowing that a given percentage of students are considered high users is more instructive if there is a comparison group, such as another grade level or the same grade level at a previous time.

Sampling Plan

A sampling plan was prepared that would keep administrative costs to a minimum but obtain accurate estimates of use statewide and by region. A target figure of 20,000 students across three grades was set. This represents approximately nine percent of all Washington public school students at grades six, eight, ten, and twelve.

Sampling was done at the school level. Of the more than 1,700 public schools in Washington, about 187 were selected for the survey sample. The sample included another 78 schools, which were to be used if any of the original sample schools chose not to participate (as well as an additional 49 private schools which were not included in the results presented in this report).

All students within each sample school at a selected grade were surveyed to minimize administrative burden and class disruption. This ensured that an accurate picture of substance use could be obtained for each participating school and prevented any chance of sampling bias within the school. The advantages of census sampling within schools outweigh any disadvantages.

In order to assure a representative statewide sample, schools were stratified by region, size, and rurality. A school was the sampling unit. This is called a *cluster sample*, since the students are clustered together in the school.

Educational Service District (ESD) service areas were combined to form four regions as close to the same size as possible. These regions were Northeast (ESD 101), Southeast (central and southeast area covered by ESDs 105, 123, and 171), Southwest (the Olympic Peninsula and southwest areas covered by ESDs 112, 113, and 114), and Puget Sound (Metropolitan Seattle and Tacoma within ESD 121, and ESD 189).

Each school was labeled *rural* if the district it served had a population which was at least 75 percent rural as defined by the 1990 U. S. Census of Population and Housing. *Non rural* districts have less than 75 percent rural population. This is obviously a rough estimate of rurality, but one that helps to distinguish the economic and social characteristics of schools. The census defines "urban" as places of 2,500 or more persons incorporated as cities, villages, boroughs and towns, but excluding the rural portions of "extended cities." "Urban" also includes other territory, incorporated or unincorporated, included in urbanized areas. The census itself designated places of 2,500 or more persons. Territory, population and housing units not classified as "urban" are considered "rural."

Schools with at least ten students at the target grade were selected randomly within each cell of the sampling design. Alternative schools and certain other special schools were included.

The district superintendent for each school selected was sent a letter signed by the Superintendent of Public Instruction requesting their participation in the state survey and including information on the survey. They were asked to return a card indicating their willingness to participate and a contact person for the school. All schools which did not respond were given a follow-up call by OSPI staff. Some of the reasons given for non-participation included recent participation in a local survey, concerns about press coverage of local results, and lack of time needed to secure the necessary approvals. Because of the need for additional time for districts to get local approval to participate, data collection began in December (instead of November, as planned) and continued into February.

The obtained sample of schools was lower than that which was planned. Many more schools declined to participate than had in previous years. As a result of this lower participation, the data were augmented by schools which had not been selected in the original sample but which volunteered for inclusion (so-called "piggy-back" schools). In order to determine if it was reasonable to combine these two groups of schools, (i.e., participating schools drawn for the sample and piggyback schools), a comparison was made of the responses of these two groups of schools on several of the key questions on the survey. Essentially, there were no differences in the responses of participating sample schools and piggyback schools (i.e., there were no more statistically significant differences than would be expected by chance, given the number of statistical tests performed). It was therefore concluded that it was not unreasonable to combine the responses from participating sample schools and piggyback schools.

While the returned surveys represented each of the regions and school sizes, there were some school-size-grade combinations which did not have sufficient representation. For example, no eighth grade students in small non-rural schools in the Northwest region were surveyed. As a result, the Northwest and Puget Sound regions were combined, as were the small and large urban school sizes. Results are now reported for four regions and for rural and non-rural schools.

Data Analysis

Any complex sampling design such as the stratified cluster sample used in this study requires that each student's responses be weighted in relation to the size of the school and the proportion of schools sampled from within the cell. This weighting scheme adjusts the impact of each student so the results are as close as possible to what would be gained from a statewide random sample. In Table B-1, key characteristics of the statewide public school population, the obtained survey sample, and the weighted survey sample are presented. Note that the impact of the statistical weighting procedure at each grade is to bring the weighted sample proportions closer to the actual statewide population proportion at each grade. Since the weighting is based in the two sampling strata, geographic region and size/rurality, the ultimate ethnic representation is the consequence of these other factors and will not experience as close a match to actual population statistics. The weighting process will occasionally yield a weighted sample for even one of the primary sampling strata which is farther from the actual proportion than the actual sample. These occurrences are rare, however. Importantly, **all percentages in this report are based on the weighted sample**. Table B-1 describes the distribution of the sample by rurality, geographic region, and ethnicity. The distribution from the total population is provided for comparison to the unweighted and weighted distribution obtained in the sample.

Administration

Participating schools were sent a packet of administration instructions to ensure standardization of these procedures. A survey instrument and answer sheet were distributed to each student. The teacher read the survey instructions aloud as the students followed along. Students were told that their responses were completely anonymous—they were not to write their names on the survey answer sheet. To enforce confidentiality, students were instructed to bring their completed answer sheet to the front of the class and place it in an envelope supervised by an appointed student. That appointed student sealed the envelope and took the materials to the office.

Table B-1.
Description of Actual and Weighted Sample.

	Group	Percent of Public School Population	Percent of Actual Sample	Percent of Weighted Sample
Grade 6	East/Northeast	10%	8%	12%
	Central/Southeast	15%	20%	15%
	West/Southwest	22%	15%	24%
	Puget Sound/Northwest	53%	57%	49%
	Non-rural	76%	67%	79%
	Rural	24%	33%	21%
	Asian	6%	6%	6%
	Black	4%	5%	5%
	Hispanic	5%	7%	7%
	Native American	3%	10%	10%
	White	82%	72%	72%
Grade 8	East/Northeast	10%	16%	18%
	Central/Southeast	15%	10%	9%
	West/Southwest	22%	12%	25%
	Puget Sound/Northwest	53%	61%	48%
	Non-rural	75%	72%	77%
	Rural	25%	28%	23%
	Asian	6%	7%	7%
	Black	4%	5%	4%
	Hispanic	5%	6%	6%
	Native American	3%	7%	7%
	White	82%	76%	77%

Table B-1 (con't). Description of actual and weighted sample.

	Group	Percent of Public School Population	Percent of Actual Sample	Percent of Weighted Sample
Grade 10	East/Northeast	10%	4%	5%
	Central/Southeast	15%	8%	7%
	West/Southwest	22%	11%	21%
	Puget Sound/Northwest	53%	77%	67%
	Non-rural	77%	70%	83%
	Rural	23%	30%	17%
	Asian	6%	5%	5%
	Black	4%	2%	2%
	Hispanic	5%	4%	4%
	Native American	3%	6%	6%
	White	82%	83%	83%
Grade 12	East/Northeast	10%	5%	7%
	Central/Southeast	15%	11%	9%
	West/Southwest	22%	9%	13%
	Puget Sound/Northwest	53%	76%	71%
	Non-rural	77%	67%	79%
	Rural	23%	33%	21%
	Asian	7%	5%	5%
	Black	3%	2%	2%
	Hispanic	5%	4%	3%
	Native American	2%	3%	3%
	White	83%	86%	86%

Table B-2.
Number and Percent of Surveys Processed

1990 public school enrollment (Grades 6, 8, 10, 12)	239,917
Total number of answer sheets received by NWREL from public schools	16,610
(Percent of enrollment)	(7)
Sheets discarded due to dishonesty, out of range answers, or impossible patterns	1,147
(Percent of sheets received)	(7)
Total included in analysis	15,463

Students were told that the survey was completely voluntary. They did not have to participate, and they could leave unanswered any questions they thought too personal. Some schools eliminated the questions on sexual behavior and suicide before administering the questionnaire.

Quality Control Screening

Quality control procedures were developed with prior surveys to screen for incomplete, falsified, or otherwise unusable answer sheets. The effects of these factors on the obtained sample are described in Table B-2.

Since students were allowed to decline and some students were absent on the day the survey was administered, less than 100 percent of the target students were surveyed. Data reported by teachers appear to underrepresent enrollment, absences, and refusals, since teachers did not uniformly complete the class information on the envelopes in which the surveys were returned. Answer sheets were unusable if the student was in a grade not included in the survey or if the student took an answer sheet but did not answer any items. This accounted for less than one percent of the sheets returned.

An extensive screening procedure was applied using a computer program. Additional sheets were discarded if the student admitted dishonesty, consistently marked items out of range (e.g., marked E on items with only two or three choices), or claimed an impossibly high level of use. About 7 percent were rejected for these reasons.

Substance use, as well as other risk behaviors, is probably higher among those students who were not included in the survey due to absenteeism, dishonesty, or inappropriate responses. Thus, the survey results reported here may be an underestimate of substance use and other risk behaviors in Washington in 1992. The same was true for substance use items in 1988 and 1990, however, so the 1988 to 1990 to 1992 comparisons featured throughout this report would not be seriously affected if the absentee/refusal rates were the same each year. For an excellent discussion of this issue, see Johnston, Bachman & O'Malley (1989).

Validity

Questions are often raised as to whether students are honest in responding to a survey about such a sensitive issue as illicit drug use. Shocked by the high prevalence of substance abuse, some have argued that students are exaggerating their reports of drug use. All the evidence from this survey and similar national surveys clearly shows that all but a few students take the survey seriously and respond honestly. Some smoking research suggests, and certain drug treatment professionals feel, however, that some students may underreport their use. Thus, the survey may slightly underestimate the actual level of use.

The response patterns of students who fake high use, i.e., claim higher than actual use, or respond randomly were identified through a computer edit program. Only a small number of students falsely identified with use of a fake drug, marked high use of too many drugs, or reported lying on the survey. Surveys which match one of these patterns were eliminated from the analysis. About two percent were eliminated from analysis based on checks for dishonesty and another two percent were eliminated due to incomplete answer sheets. This is equivalent to the rejection rate observed in other studies.

It is more difficult to detect whether students are faking low use, i.e., understating their use. Keep in mind, however, that about 60 percent of seniors report some illicit drug use and over 80 to 90 percent report alcohol use. These high levels do not suggest underreporting and are quite consistent with the results from national studies. More students could be expected to skip over sensitive items if they were concerned about reporting illicit drug use.

The internal consistency of answers to related questions provides further evidence of the validity of the survey responses. For example, responses across several items concerning drinking were compared and a little more than one percent of the students were found to be inconsistent in their responses. Thus a response of *Never drink* on the beer or wine and hard liquor items would be followed with *Never drink* on the quantity item. This was also true of other risk behaviors, for example, ever having sexual intercourse.

National studies of substance abuse also cite extensive evidence about the validity of these survey responses (Johnston, et al., 1989). Students have been highly reliable in their responses over a three- to four-year period. Responses between logically related items are very consistent. The observed trends and patterns of use have been consistent over time after nine years of research. The investigators concluded that properly administered self-reported surveys produce valid data.

Sample Representativeness

One of the greatest concerns with conducting a survey of this type is knowing that the sample upon which the survey is based is representative of the population throughout the state. It is generally not satisfying to be restricted to making statements solely in reference to the respondents, even though with such a large number of respondents these statements are powerful. Rather, it is preferable to be able to generalize from the sample to the population as a whole. Given the results of the four methods of inquiry described below, it is not unreasonable to assume that the final pool of respondents is representative of students statewide.

The ideal method of insuring that a sample is representative of the population from which it was drawn is to give equal chance to every member of the population for being included in the sample (i.e., to sample at random). In the case of this survey, a stratified cluster sampling plan was used, with schools as the unit of selection. In order for the random sample to be adequate for generalization back to the population, however, there must be an adequate survey return rate from those included in the sample, in order to minimize the likelihood that differences exist between those who did and did not respond. The return rate from the sample for the present survey, however, was quite low, and therefore this assumption was not met. In addition, it was necessary to add responses from those districts outside the sample who had elected to administer the survey for their own purposes. The addition of these respondents was reasonable, given that both groups of respondents (those in the sample who participated and the additional districts) were similar in that both had an interest in collecting the survey data. Given this situation, it was necessary to make a determination about whether or not the resulting data set was representative of the student population throughout the state. Four methods of assessing representativeness were followed. Their results are described below.

The first method of assessing representativeness involved grouping schools drawn for the 1992 sample, dividing them into participants and non-participants, and then searching to see if any of these schools had also been included in the sample upon which the 1990 Washington state survey results were based. By looking for differences between these two groups based on previous survey data, it was possible to examine how similar they were. In all, twenty-seven schools were matched, which allowed for comparisons based on 3,268 students. Twelve crosstabulations were then performed using the drug scale, alcohol scale and risk scale for each of the four grades surveyed (sixth, eighth, tenth, and twelfth). None of the differences were statistically significant (chi-square; $p < .05$). Several other crosstabulations based on items dealing with AOD use were also conducted, and only a few were significant (no more, however, than would be expected by chance given the number of analyses performed). Thus, it was concluded that based on their performance on the 1990 survey, participants and non-participants from the 1992 sample were not different.

The next method involved examining trends across the 1988, 1990, and 1992 results. As presented in Tables 1 and 2 of this report, there are no wild spikes in the data. This again suggests that the results of the 1992 survey are based on a sample similar to that of the preceding two years.

The third method involved a comparison with national data from CDC's Youth Risk Behavior Survey (1990). Because the reports prepared by CDC are for students from a combination of grades, it was necessary to re-analyze the YRBS data so that comparisons between Washington's 1992 statewide survey and CDC's national survey could be made among students at the same grade level. The results of this comparison were less conclusive. While the two surveys yielded similar results on many items, there were many others that did not look at all alike.

Finally, there was discussion among state agency representatives from the Department of Health and the Office of the Superintendent of Public Instruction regarding the reasons that schools had declined participation. This information had been gathered through ongoing contact with schools and school districts as the agencies sought to secure their cooperation. The perception of the agency representatives was that the majority of non-participating schools had as their reasons for non-participation the perception that the survey items were too sensitive in nature, and/or that they did not have adequate time to engage the community in the process of obtaining their cooperation and interest. It was also the perception of the agency representatives, based on their knowledge of the state, that just because a school did not participate, it does not mean they have no AOD- and health-related problems in their community. In some cases it was apparent that districts did not want any existing problem to be made even better known.

Interpretation of Results

In viewing the statewide results at four grade levels on students' use of alcohol and other drugs and related attitudes and behaviors, appropriate interpretation must allow for the error and bias in the survey instrument and sampling procedures. The quality control screening and validity checks discussed above are major processing efforts NWREL conducts to ensure the results presented in this report are as accurate as possible.

Since the survey involves a statewide sampling process, however, another source of error—not detectable through data processing mechanisms—is in the extent to which the students in grades six, eight, ten, and twelve accurately represent the statewide student population at these grades. The attempt at census sampling—including all students at these grades—is an effort to minimize this error. However, as noted earlier in this chapter, student absenteeism, declining to participate, and shifts in enrollment make even this census sampling procedure imperfect.

The net effect of this "sampling error" is to make the results reported here estimates of the attitudes and behaviors of the student populations. A key question, then, in interpreting results presented in this report is whether differences in these estimated percentages (e.g., between 1990 and 1992 use rates) reflect true population differences, or whether they are within a small enough range to be considered part of the sampling error of the survey process. The determination of the size of this sampling error is a necessary step in the interpretation of results. Public opinion polls now do this routinely. When you read statements like "percentages reported here should be interpreted within plus or minus 3 percent" or "The sampling error in this poll is 5 percent," this is precisely what they are talking about. How large must the difference be in order for it to be out of the realm of sampling error and reflective of a "real" difference on which one can make judgment and decisions? Statisticians and survey researchers call this "statistical significance."

In this report, statements of statistical significance are noted in tables and are based on calculations of the sampling error for the percentages computed on all survey items. A thorough treatment of the theory behind these calculations goes beyond the scope of this report but can be readily found in survey research texts (e.g., Sudman, 1976).

The sampling error calculation uses the formula:

$$S = \sqrt{\frac{p(1-p)}{N}}$$

where: S = sampling error
p = the value of the percentage
N = the size of the sample

The size of the sampling error depends upon two things—the value of the percentage itself (e.g., use rates of 50 percent or use rates of 90 percent) and the size of the sample of students surveyed. These have the following effects. The larger the sample size, N, the lower the sampling error. That is, the more students participating in the survey, the more confident we are that the percentages estimated are accurate. Secondly, the more extreme the percentage (approaching 0 percent or 100 percent), the lower the sampling error. This is simply because, as these figures approach the extremes, there is less room to vary—you cannot have less than 0 percent or more than 100 percent!

These variations have profound effects on the interpretation of survey results. Literally, every estimated percentage at every grade level has its own sampling error calculation associated with it. For purposes of this report, however, we adopt the following conventions. Sampling error estimates are set for two percentage values—those near .50 (roughly corresponding to alcohol and tobacco use rates at several grades) and those near .10 (roughly corresponding to use rates of the more illicit drugs such as cocaine and methamphetamines).

Using the sampling error formula presented above, the sampling error values (technically, 1.96 standard errors, yielding 95 percent confidence in the interpretation) used in this report are:

	Grade 6	Grade 8	Grade 10	Grade 12
Percentages near 50	1.4%	1.4%	1.7%	2.0%
Percentages near 10 or 90	0.9%	0.8%	1.0%	1.2%

Use of these sampling error values is exemplified as follows. In the sixth grade, when the estimated percentages are in the extreme range (e.g., around 10 percent, such as the lifetime prevalence of marijuana for eighth graders), differences between 1990 and 1992 larger than .9 percent (nine-tenths of one percent) are large enough to be considered "statistically significant" and merit further discussion.

In reporting these results, the authors have already incorporated these considerations. Statistically significant differences are presented in bold type and no interpretation of trends is offered in the report unless differences exceed the bounds of sampling error as discussed here.

Sources of Comparative Data

There are several sources of comparison data available to help put the state findings in perspective. Some of these data will be used in this report.

The most useful sources of comparative data are the Fall 1988 and 1990 surveys of student substance use in Washington (Deck & Nickel, 1989; Gabriel, 1991). Since the survey content and administration procedures for the three surveys were nearly identical, the previous surveys may be used for comparison with the 1991 results.

The *Monitoring the Future* study is conducted by the Institute for Social Research at the University of Michigan (Johnston, O'Malley, & Bachman, 1990) with funding from the National Institute on Drug Abuse. This major study began in 1975 to monitor attitudes and behaviors of our nation's seniors. A survey with many questions on substance abuse is administered each spring to a national sample of about 16,000 seniors, and results are now available for the class of 1975 through the class of 1990. Many of the questions used in the Washington survey are drawn from the national survey. Others were modified for simplicity and use with younger students. In these instances, major response categories were collapsed and items combined on the survey to obtain roughly comparable data.

In recent years, statewide and citywide surveys have been conducted in a number of cities and states. Though comparisons to these surveys will not be made, they are mentioned so that interested readers may refer to them if they desire. A series of surveys was administered to students in eight school districts in Alaska in grades seven through twelve during the 1987-1988 school year (Segal, 1988) with the results aggregated across grade levels. Oregon has completed its fourth biennial survey including eighth and eleventh graders (Egan, 1988 & 1990; Finigan, 1992). California has also conducted three statewide surveys since 1987, and includes grades seven, nine, and eleven (Skager, Austin & Frith, 1991).